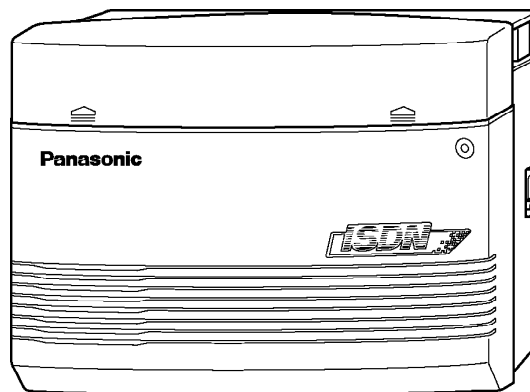


ORDER NO.KMS0005498C2

Service Manual

Digital Super Hybrid System

KX-TD612NE / KX-TD61260CE / KX-TD61261G / KX-TD61280CE / KX-TD61291CE / KX-A227X
(for North Europe)



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WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

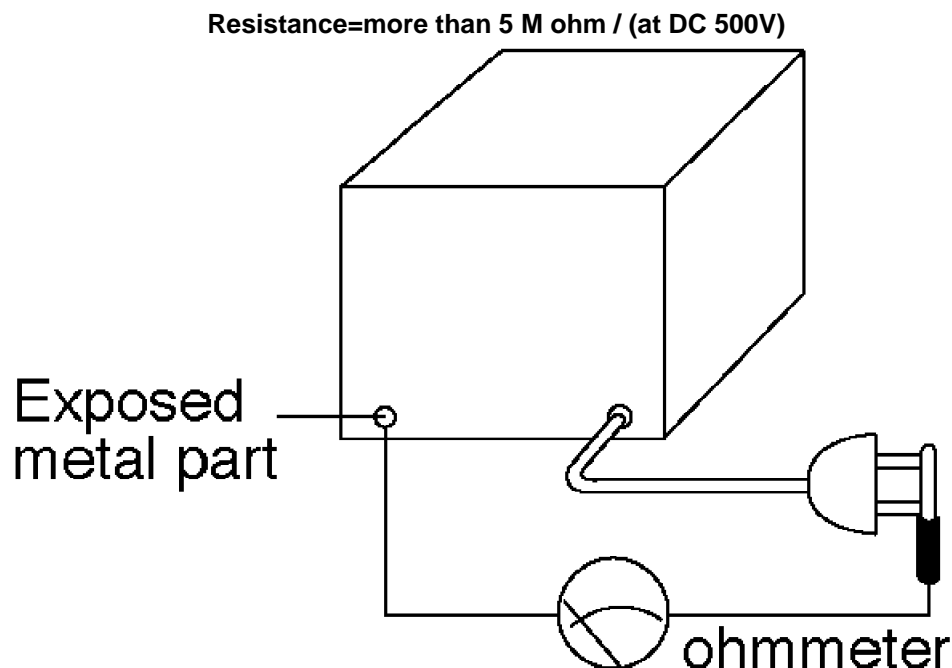
1.1. SAFETY PRECAUTIONS

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only the manufacturer's recommended components.
3. Check the condition of the power cord. Replace if wear or damage is evident.

4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to shock hazards.

1.2. INSULATION RESISTANCE TEST

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part (screwheads, control shafts, handle brackets, etc.). / "Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.
4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. / The equipment should be repaired and rechecked before it is returned to the customer.



1.3. BATTERY CAUTION

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacture. Discard used batteries according to following caution:

/

Disposal of lithium batteries should be performed by permitted, professional disposal firms knowledgeable in state government federal and local hazardous materials and hazardous waste transportation and disposal requirements. / Battery continues to have no transportation limitations as long as they are separated to prevent short circuits and packed in strong packaging. /

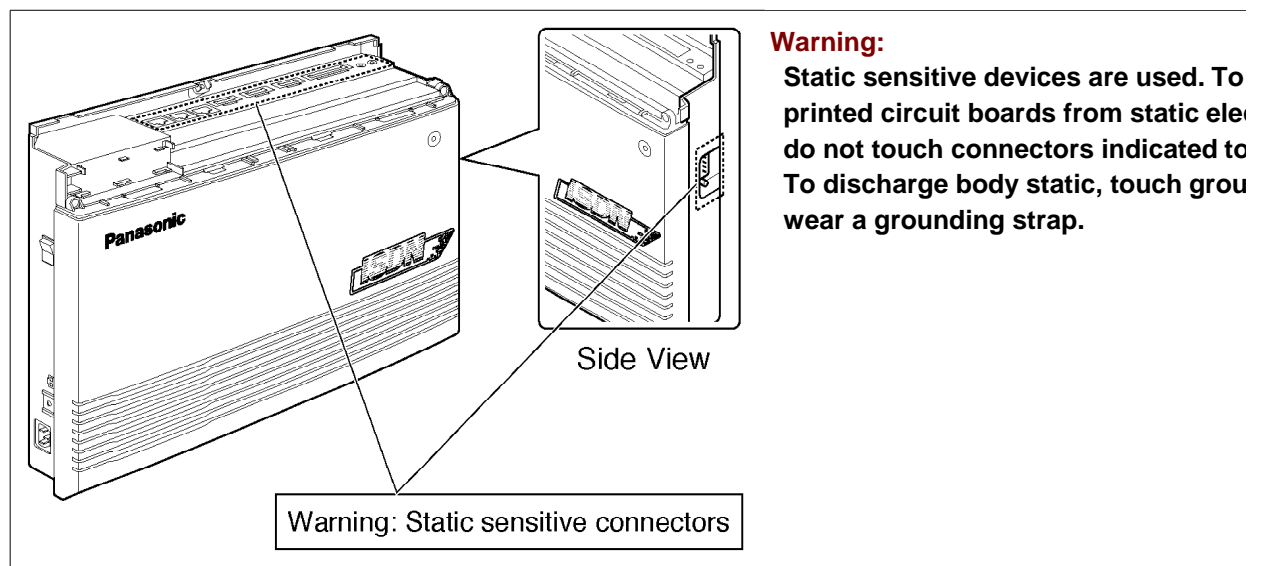
Commercial firms that dispose of any quantity of lithium cells should have a mechanism in place to account for their ultimate disposition. This is a good practice for all types of commercial or industrial waste. /

Recommend Type Number: / CR2354 (BATT) Manufactured by MATSUSHITA

1.4. FOR SERVICE TECHNICIANS

ICs and LSIs are vulnerable to static electricity. / When repairing, the following precautions will help prevent recurring malfunctions.

- 1. Cover the plastic parts boxes with aluminum foil.**
- 2. Ground the soldering irons.**
- 3. Use a conductive on the worktable.**
- 4. Do not touch IC or LSI pins with bare fingers.**



Note:

For details of installation, refer to the System Reference Manual.

1.5. SPECIFICATIONS

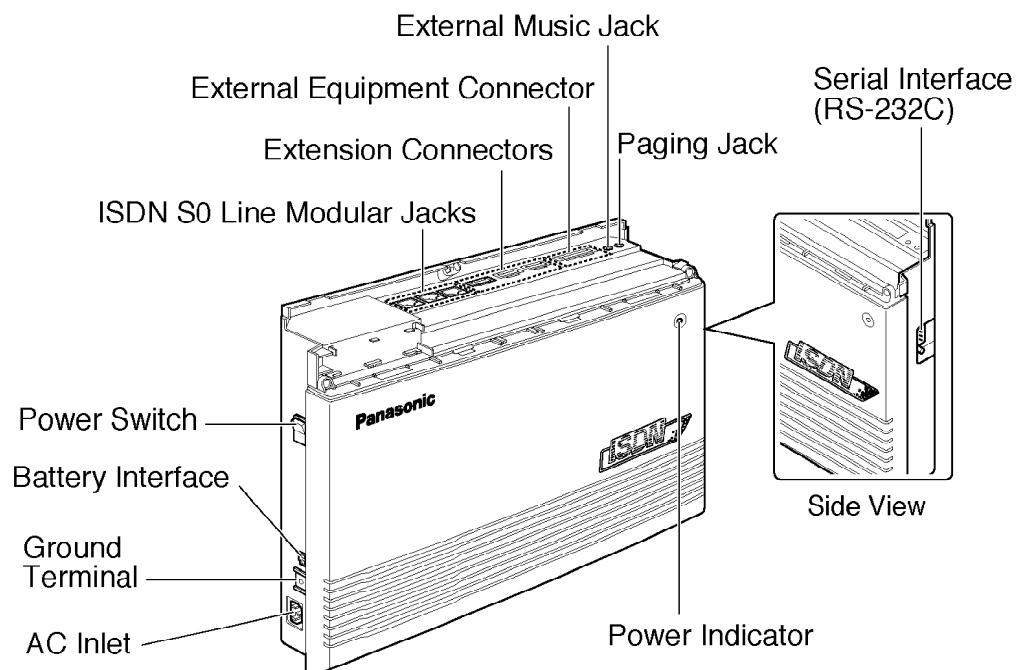
General Description

| | | |
|---|---|---|
| 1. Capacity: | ISDN lines / Extension lines | 3max. (CO lines 6max.) (12max. with XDP) |
| 2. Control Method: | Stored Program CPU: 16 bits CPU | |
| 3. Switching: | Non Blocking PCM Time Sharing Switch | |
| 4. Power Supplies: | Primary / Secondary | AC 110-240 V, 50/60 Hz Volt: +5V, +26V, -15V |
| | Power Failure | |
| | -Memory back-up duration: seven years by factory-provided lithium battery | |
| | -System operation for several hours by recommended batteries (consisting of two 12 V batteries) | |
| 5. Dialing: | Dial Pulse (DP) 10pps, 20pps, Tone (DTMF) Dialing, DTMF-DP | |
| 6. Connector: | ISDN lines | RJ45 Modular connecto |
| | Extension lines | 8pin terminal block |
| | Doorphone | 9pin terminal block |
| | Paging Output | Two-conductors Jack (1/8" JACK 3.5 mm diameter) |
| | External Music Input | Two-conductors Jack (1/8" JACK 3.5 mm diameter) |
| 7. EXT Connection Cable: | Single line telephone | 1 pair wire (T, R) |
| | KX-T7230, KX-T7235, KX-T7250, KX-T7531, / KX-T7533, KX-T7536 etc. | 1 pair wire (L, H): T and not necessary or / 2 pair (R, L, H) for XDP |
| | KX-T7310 etc. | 1 pair wire (T, R) |
| | KX-T7130, KX-T7020, KX-T7050 etc. | 2 pair wire (L, H, T, R) |
| 8. SMDR: / (Station Message Detail Recording) | Interface | EIA (RS-232C) (D-SUB, 9pin) |
| | Output Equipment | Printer |
| | Detail Recording | Date, Time, Extension Number, Department Code, ISDN Number, Call Duration, Call Fee, Account Code |
| 9. Dimensions: | 368(W) × 95(H) × 284(D) mm (14 1/2" × 3 3/4" × 11 3/16") | |
| 10. Weight: | 2.5 kg (5.5 lb) | |

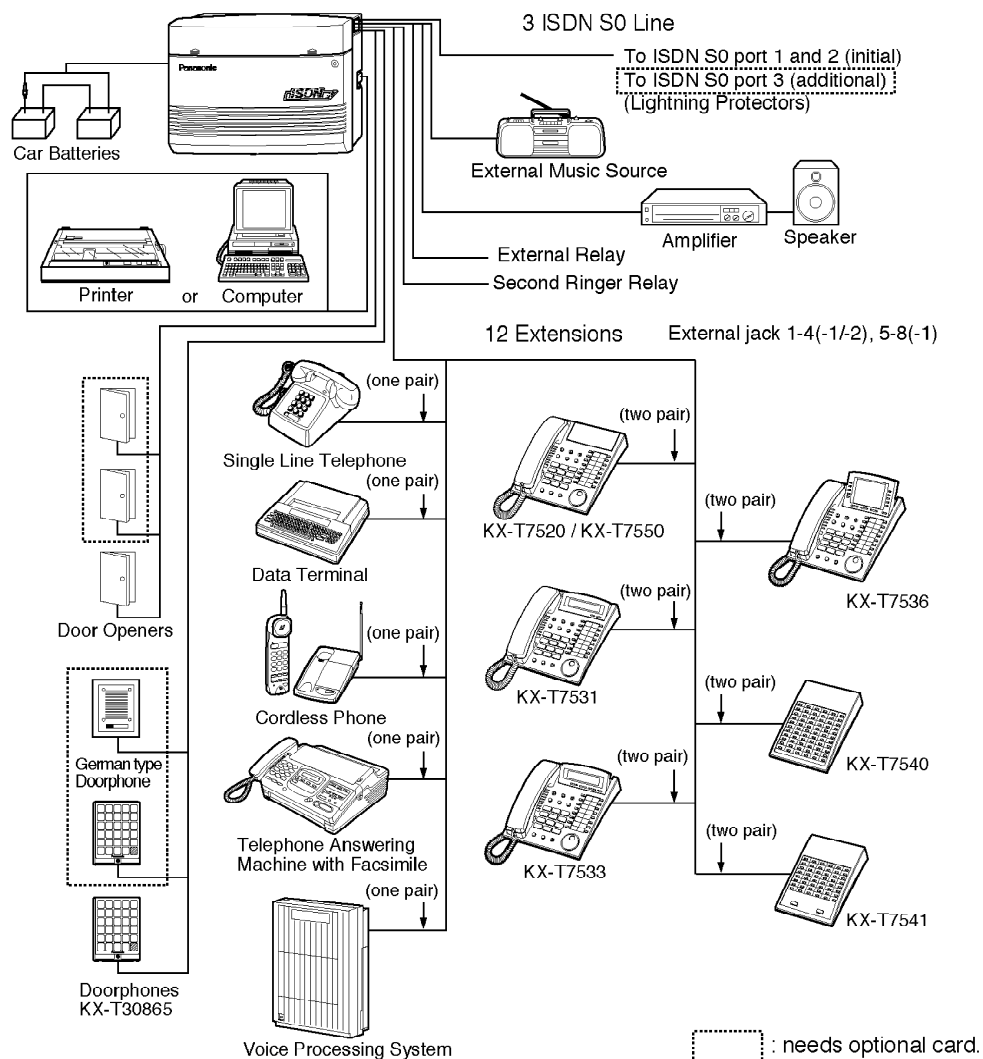
CHARACTERISTICS

| | | |
|-------------------------------|--|--|
| 1.Station Loop Limit: | KX-T7531/ KX-T7533/ KX-T7536/ KX-T7230/ KX-T7235/ KX-T7250/ KX-T7130/ KX-T7020/ KX-T7050 etc. Single line telephone/ KX-T7310/ etc. Doorphone | 40 ohms 600 ohms including set 20 ohms |
| 2.Minimum Leak Resistance: | 15000 ohms | |
| 3.Maximum Number of Station: | 1 for a KX-T7531/ KX-T7533/ KX-T7536/ KX-T7230/ KX-T7235/ KX-T7130/ / KX-T7020/ KX-T7050 or a single line telephone. / 2 parallel connection of a proprietary telephone and a single line telephone. | |
| 4.Ring Voltage: | 80 Vrms at 25 Hz depends on Ringing Load | |
| 5.Primary Power: | AC 110-240 V, 50/60 Hz | |
| 6.Central Office Loop Limit: | 1600 ohms maximum | |
| 7.Environmental Requirements: | 0-40°C, 10%-90% (relative humidity) | |

1.6. LOCATION OF CONTROLS



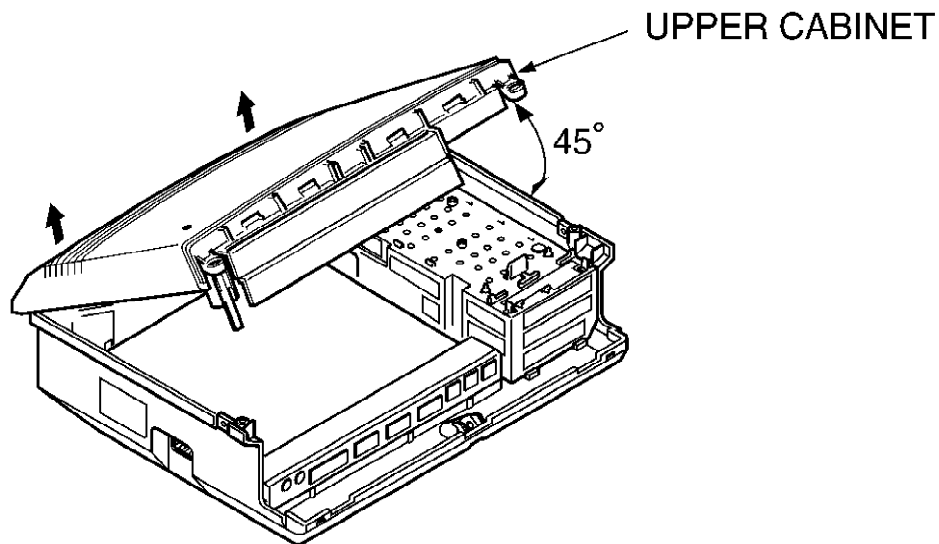
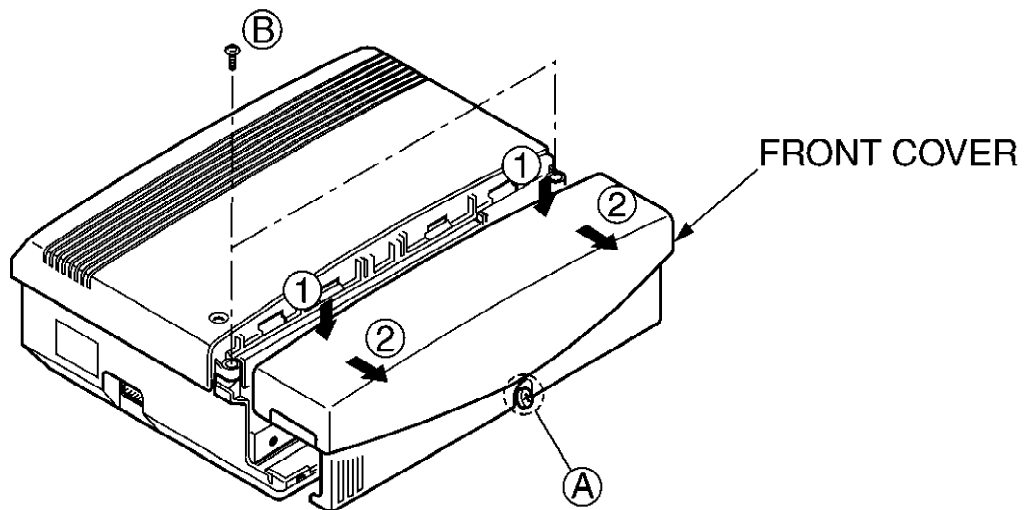
1.7. SYSTEM CONNECTION DIAGRAM



1.8. DISASSEMBLY INSTRUCTIONS

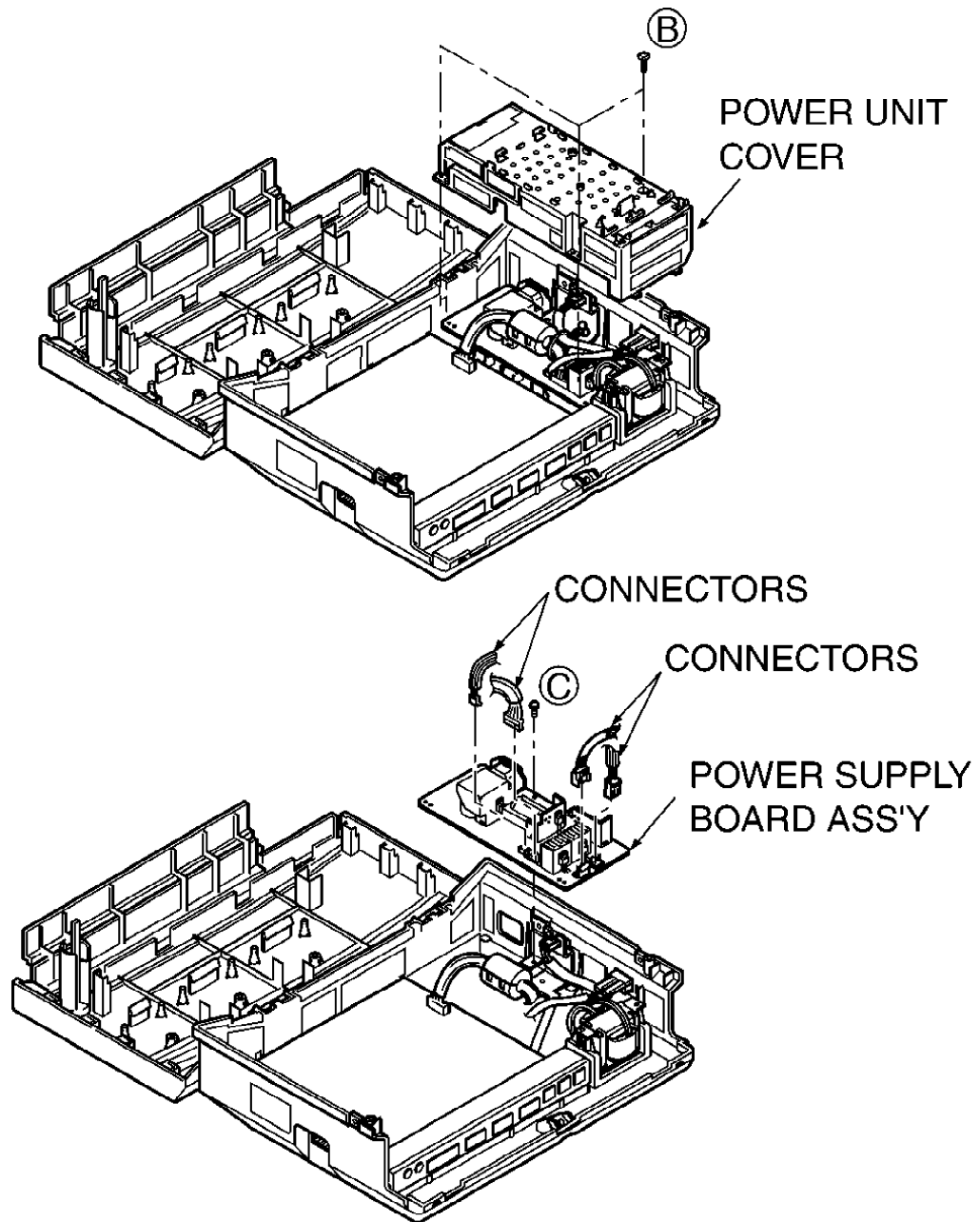
1.8.1. HOW TO REMOVE THE COVER (Procedure 1)

1. Loosen the screw A.
2. Slide the top upper cabinet to the direction of the / arrow while pressing the marked position.
3. Remove the 2 screws B.
4. Open the upper cabinet (45°).
5. Remove the upper cabinet.



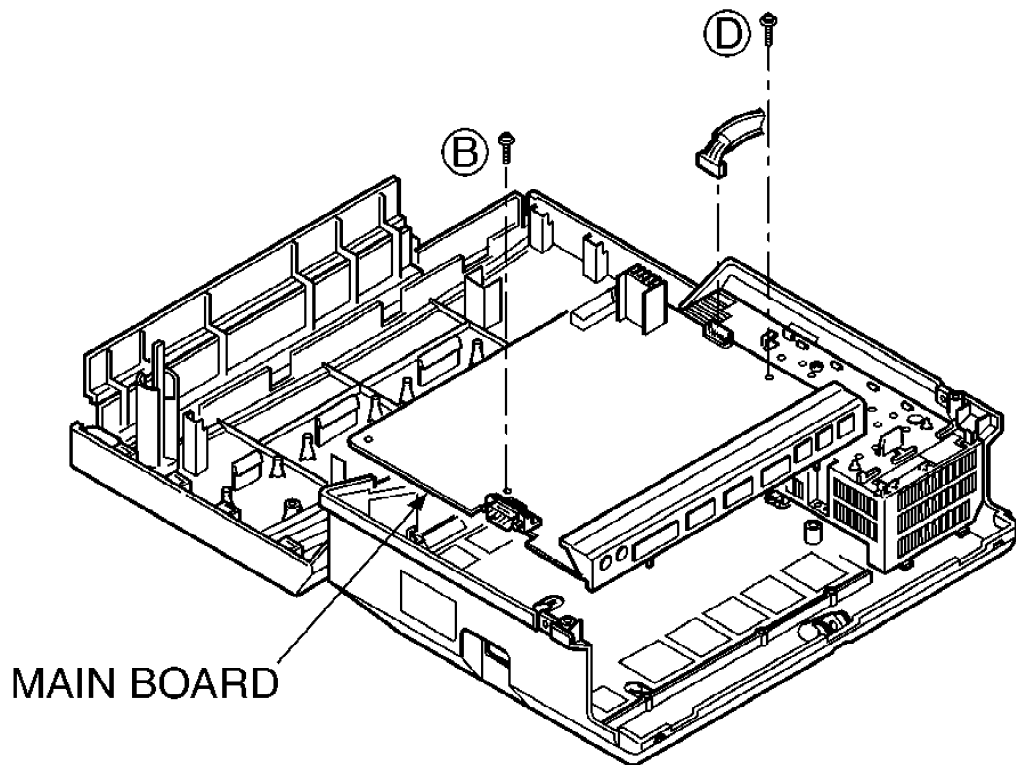
1.8.2. HOW TO REMOVE THE POWER SUPPLY BOARD (Procedure 1 → 2)

1. Open the upper cabinet. (Refer to steps 1~3 of No.1.8.1.)
2. Remove the 3 screws B.
3. Remove the power unit cover.
4. Pull out the 4 connectors.
5. Remove the 1 screw C.
6. Remove the power supply board ass'y.

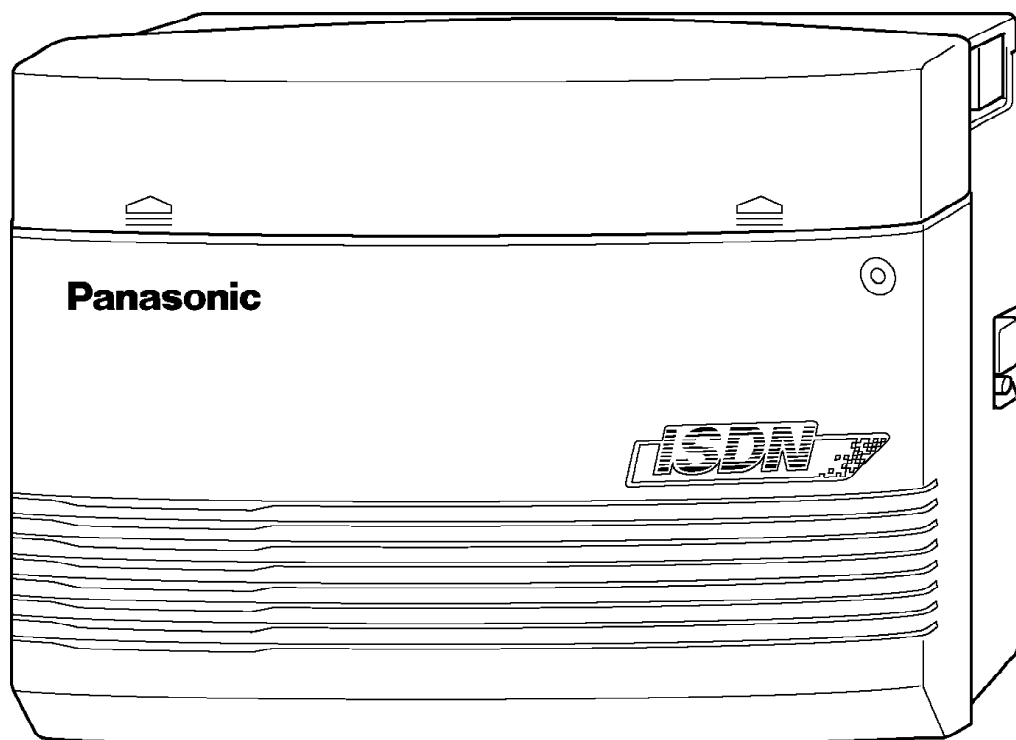


1.8.3. HOW TO REMOVE THE MAIN BOARD (Procedure 1 → 3)

1. Pull out the connector.
2. Remove the 2 screws B and D.
3. Remove the main board.



2. KX-TD612NE (MAIN UNIT)



2.1. CIRCUIT OPERATIONS

2.1.1. OUTLIES AND FUNCTIONS OF EACH UNIT

In this section, the unit compositions, outlines, and functions of this system are described as

follows.

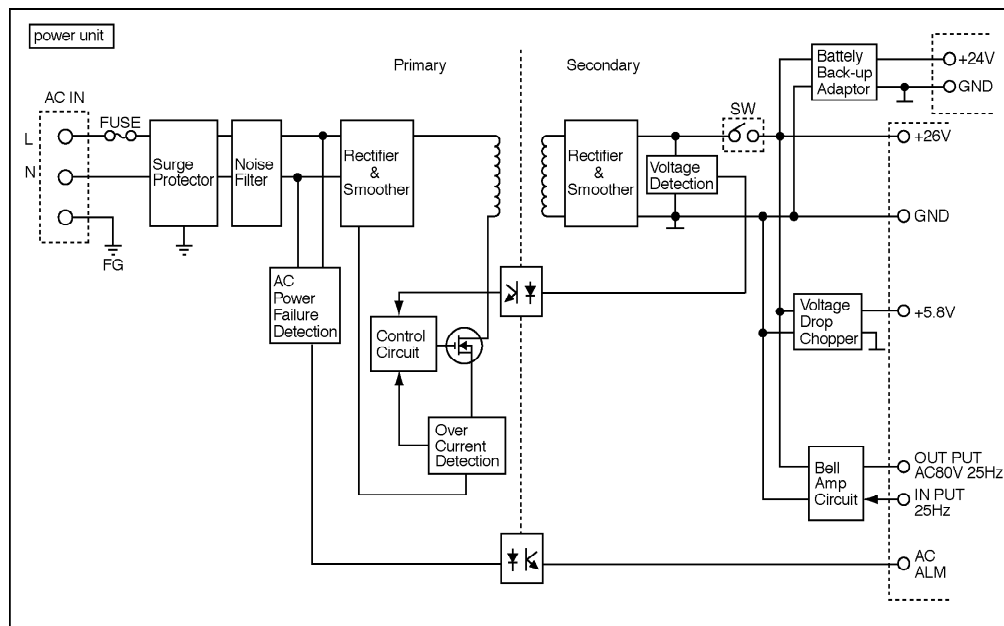
| Classification | Board Name | Model No. | Quantity | Ren |
|-------------------|---|--------------|----------|------------------------|
| Initial Equipment | Power Supply Unit | KX-TD612NE | 1 | |
| | Main Board | KX-TD612NE | 1 | |
| Option | 1 BRI Expansion Card | KX-TD61280CE | 1 | 1S0 |
| | Voice Message Card | KX-TD61291CE | 1 | |
| | Doorphone/Dooropener Card for KX-T30865 | KX-TD61260CE | 1 | Doorphc / Doorop 2port |
| | Doorphone/Dooropener Card for German type | KX-TD61261G | 1 | Doorpho Doorope |
| | Back-up Battery Cable | KX-A227X | 1 | |

2.1.2. POWER SUPPLY UNIT

The power supply unit generates two kinds of DC voltage, +26V and +5.8V from AC power supply, and supply them to the system.

| Function | Description |
|----------------------------------|---|
| DC voltage generation function | This function generates two DC voltage (+26V and +5.8V) from the AC power supply and supplies them to the system. |
| Ring signal output function | Based on the 25Hz sine wave signal output from the TD612, this function generates ringing and outputs it to the system. |
| AC cutoff detection function | This function detects any cut off of the AC power supply and outputs an AC alarm signal to the system. |
| Battery back up adapter function | This function connects battery and service unit. Without battery adapter, only needs cable to connect battery and service unit. |

2.1.3. BLOCK DIAGRAM FOR POWER UNIT



2.1.4. MAIN BOARD

The main board has CPU, which control the system, and TSW (Time Switch), which switch the PCM telephone call way, as its main function. Furthermore, the main board has common resources to the systems as clock function, clock making function, and so on. Also, I/F function, which connects the system and the terminal units.

| | Function | Content |
|---------------|-------------------------------------|--|
| Inside of CPU | CPU Core | Following the programs, CPU function controls all the system. |
| | Serial DMA Controller | Controls the transmission between SCC1 and Internal RAM. |
| | SCC1, SCC2 | SCC1 controls RS 232C interface. SCC2 is reserved. |
| Inside of G/A | TSW Function | Conducts a time division transforming process such as PCM data temporally, and outputting the data to random random PCM serial data stream. |
| | HDLC Controller | Controls the transmission of DPITS data. Two channels controller are equipped. Equivalent to MT8952B for KX-T |
| | Clock Function | Equivalent to Clock IC (MS6242) for KX-TD series. |
| | Tone Generator Detection Controller | 1) Enables Three Persons Conference. (6 channels) / 2) (a dual tone. (4 channels) |
| | Timer Counter | The basic frequency is 16.384 MHz. The timer counter is composed of an interval timer of two channels, a watch and baud rate generator. |
| | A/DPITS Communication Controller | Used to control the digital communication of 2B + D for digital typed telephones and digital typed telephones. |
| | Parallel I/O Port | Used to receive comparatively slow status, and to control status at bit unit. Parallel I/O Port is composed of system port groups #A ~ #F, which can be able to access by 8 bit port group #G, which can be able to access by 4 bit. |
| | PCM Stream Controller | Composed of the basic Timing generator of PCM stream eight channel pulse generator blocks. |

| Function | | Content |
|--------------------------------|---------------------------------|---|
| ISDN Block | ISDN circuit interface | This is an interface circuit to connect ISDN lines and the |
| Expansion Block | Current Supply | Supplies the communicative current to SLT. |
| | Hook Detection | Detects On-Hook and Off-Hook when a bell signal is not |
| | Ring Trip Detection | Detects Off-hook when a bell signal is presented. |
| | 2W-4W Lines Conversion | Converts 2W signals from SLT to 4W signals. |
| | A/D and D/A conversion | Conducts a conversion between 4W analog signals and digital signals by CODEC. |
| Door-phone | Door-phone Calling detection | Detects a calling sign from a door-phone side. |
| | Door Opener Controller Function | Has one channel of relay contact output for a door open controller. |
| | Current supply | Supplying the current to the Door-phone. |
| | Detect connection of Door-phone | Detect if the Door-phone is connected. |
| Internal Music on Hold | | Possible by Music on Hold IC. |
| Voltage Watching Function | | Observes +5V and +15V voltages. It conducts the system when +5V voltage is derated. |
| Back-up Function | | <ul style="list-style-type: none"> -Back up the around CPU (+5V) when AC power momentarily fails. -Back up the system data of RAM by lithium battery. |
| Bell Signal Generator Function | | Generates 25 Hz signal from I/O port of G/A, Amplifies a voltage by power amplifier and transformer, and supplies extensions. |

2.2. KX-TD612 Block Diagram

2.3. EXPLANATION OF CIRCUIT OPERATION

2.3.1. POWER SUPPLY UNIT

1. DC voltage generation circuit:

A. Switching section

The switching frequency is 80kHz. Q1 is PWM-controlled by IC1 in order to regulate the output voltage. Secondary voltage detection is performed by R113, R114 and VR101, and changes in the secondary voltage with respect to the base voltage of Q101 are isolated by photo coupler PC1 and sent to IC1.

B. Secondary circuit

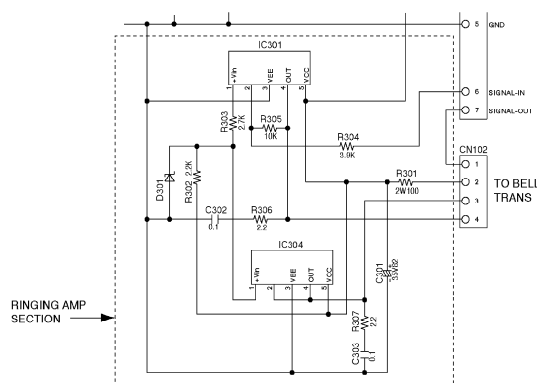
At first, it produces +26V DC voltage. And it produces +5V DC voltage from voltage drop chopper circuit.

2. Ringing signal output function:

Ringing signal (25Hz, 8Vac from main board) is amplified in power by power amplifier circuits (including of IC301, IC304, R301-307, C301-303 and D301). Ringing signal amplified in power is

transmitted to the ringing transformer through pin 7 of CN101.

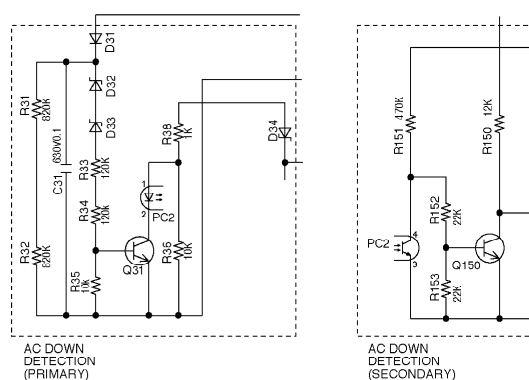
Circuit Diagram



3. AC cut off detection function:

AC power failure is detected by R31 - R36, R38, D31-34, C31 and PC2. When AC power is on, pin 4 of PC4 is high. When AC power is turned off, pin 4 of PC2 changes to low.

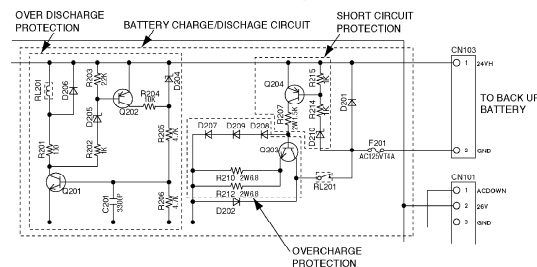
Circuit Diagram



4. Battery back up function:

This back up battery adapter circuit has DC supply function, from battery (+24V) to service unit and DC charge function from service unit to battery (+24V). Charge current is 0.4A.

Circuit Diagram



2.3.2. MAIN BOARD

1. CPU Block

CPU circuit is mainly composed of following parts. / 16 bit CPU (IC100) / ROM (IC102, IC103, IC104, IC105) / RAM (IC106, IC107) / Gate Array (IC101) etc. /

Circuit Operation:

CPU(IC100) controls the programs in ROM (IC102, IC103, IC104, IC105), that is, the system. / RAM (IC104, IC105) is backed up by back-up battery (BAT1), and keeps system data. / Gate Array is equipped with following function.

(a) TSW (Time division Switch) Controller Function / (b) Clock Function / (c) Tone Generator Detection Processor / (d) Timer Counter / (e) Parallel I/O Port / (f) PCM Highway Controller Function / (g) APT Data Communication Circuit / (h) DPT Data Communication Circuit / (i) HDLC Controller /

(a) TSW (time Division Switch) Controller Function / Inside of G/A, four PCM highway are installed. One PCM highway can have 32 channels of 8 bit PCM data, therefore maximum 128 channels of PCM data are available. Followings are the assignments of each highway. / HW0: Conference Circuit, Tone-DTMF Generator / HW1: ISDN#1~#3, Paging, Music on hold, Door-phone, Option / HW2: EXT#1~#8(DPT), EXT#1~#4(APT, SLT) / HW3: EXT#5~#8(APT, SLT) /

(b) Clock Function / This function supplies a real time clock to the system. This function has its own power source, and is backed up by battery. /

(c) Tone Generator Detection / This is signal processor to use following function

1. Three Persons Conference / Conference function is for enabling the three person's conference. This function is connected with HWS0 of the down highway and HWR0 of the up highway. After the voice data which are transferred to HWS0 at TSW are processed with the summation, and represented to HWR0 and transferred at TSW again. This function covers 3-person 6-conference. / 2. Tone Generator Function / Tone Generator Function presents 4 kinds of the call progress tone and 2 channels of the DTMF tone to HWS0 of the down highway. /

(d) Timer Counter / The timer counter, its basic frequency is 16.384 MHz, is composed of Watchdog timer, and other kinds of timer. /

(e) Parallel I/O Port / Gate Array (IC101) is composed of system port and port group #A~#F, which can be able to access by 8 bit,

and of port group #G, which can be able to access by 4 bit. /

(f) PCM Highway Controller Function / This function generates the basic timing of PCM Highway, and eight channel pulses.

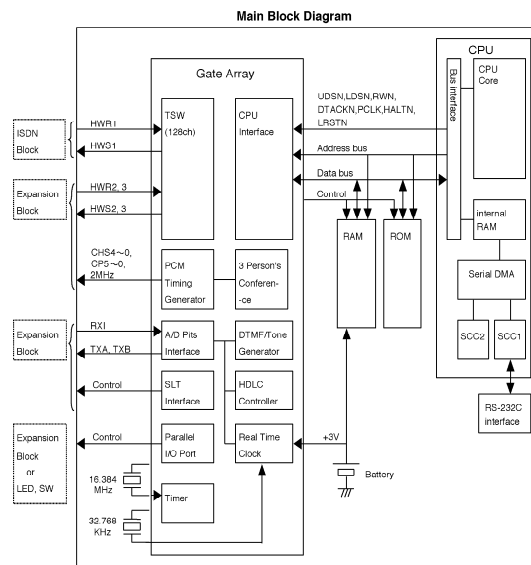
Following are the clocks generated. / CHS0 ~ 4: 128, 64, 32, 16, 8 kHz Channel select signal / CP0 ~ 5: 8 kHz Synchronous signal for CODEC /

(g) APT Data Communication Circuit / APT Data Communication Circuit is a circuit which performs the serial/parallel conversion of the control data between APT comm. Paths and the main CPU(IC100). This circuit covers 4 lines corresponding to each extension, and 4 lines are integrated into on Gate Array(IC101). / / / / /

(h) DPT Data Communication Circuit / DPT Data Communication Circuit is a circuit which has the following functions. This circuit covers 8 lines corresponding to each extension, and 8 lines are integrated into one Gate Array(IC101).

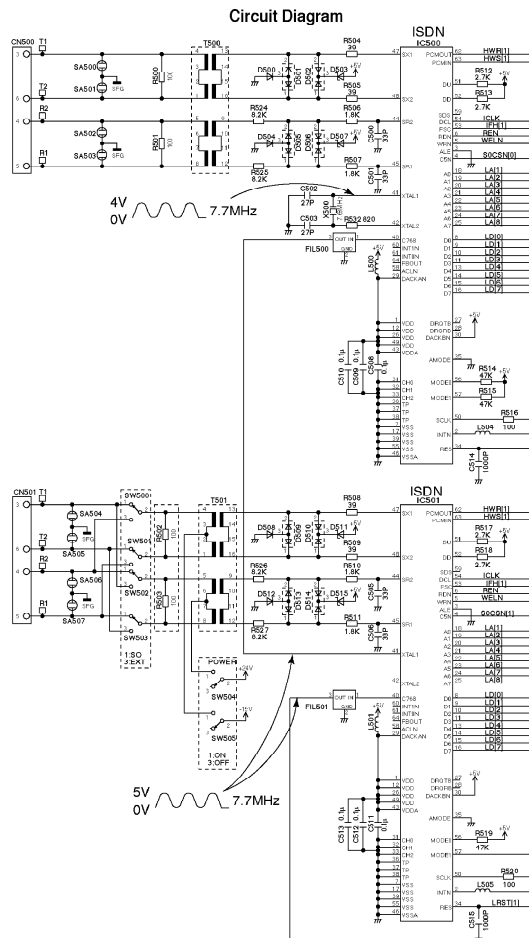
1. B channel communication / The B channel data are transferred between the DPT comm. Path and the PCM highway. The transmitting capability is 64 kbps X2. / Note: B channel stands for "Barer Channel", normally transmitting the voice data. / 2. D channel communication / The data are transferred between the DPT comm. Path and the HDLC controller, serial bus. The transmitting capability is 16 kbps. Because the communication between HDLC controller and this circuit is done as 1 by 1, the HDLC controller switches the communication extension every for 8 ms. / Therefore, the communication per one extension is done only 8 ms at 64 ms cycles, the actual transmitting capability is 2 kbps. / Note: D channel stands for "Data Channel", transmitting CPU control data. / 3. C channel communication / The serial/parallel data conversion is done between the DPT comm. Path and the main CPU data bus. The level (H or L) transmission is only possible through the C channel. / Note: C channel stands for "Control Channel". /

(i) HDLC Controller / HDLC controller is a circuit which functions the data format conversion of the D channel between the DPT comm. line installed with a Gate Array (IC101) and the CPU data bus by following the HDLC protocol. The serial/parallel conversion is done at the same time. Though this circuit communicates with 8 channel of the DPT comm. circuit, since it can communicate only with one channel at a time, as before mentioned it, switches the communicating extension every for 8 ms. /



2. ISDN Block

Composition: / ISDN I/F IC (IC500, IC501) / ISDN Transformer (T500, T501) etc. / / Circuit Operation: / This circuit has the S-Bus interface circuit and the ISDN lower LAYER (LAYER 1 only) control circuit. / The component switches B and D channel between the S/T interface and the PCM Highway I/F. /



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3. Expansion Block

Composition: / This is composed of the following circuits: / (a) Current Supply Circuit / (b) Hook Detection Circuit / (c) Ring Trip Detection Circuit / (d) Bell ringing section /

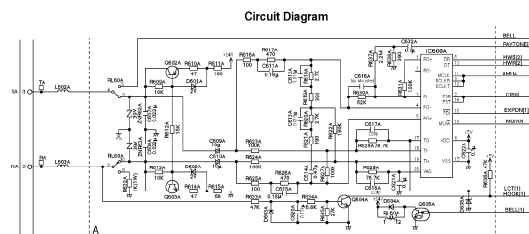
Circuit Operation: / (a) Current Supply Circuit / Current Supply Circuit is constant-current circuit which supplies the call current to SLT. / With the telephone off hook, a DC loop is formed, and current is supplied to the telephone. / This circuit is limited to about 25mA by R610, D601 R614 and D602. / +24V → R611 → R610 → Q602 → RL60 → L602 → telephone → L603 → RL60 → Q603 → R614 → R615 → GND /

(b) Hook Detection Circuit / When the telephone handset is taken off, DC loop is formed and collector of Q604 change to L from H. And Gate Array detects off hook condition. / When the handset is replaced back on hook, the DC loop is interrupted and collector of Q604 change to H from L. / And Gate Array detects on hook

condition. / Pulse dialing is a input either in the on hook or off hook condition, and the break number (on hook condition) is counted and read as the dial number. /

(c) Ring Trip Detection Circuit / This is for detecting off-hook of SLT when the bell signals are presented. /

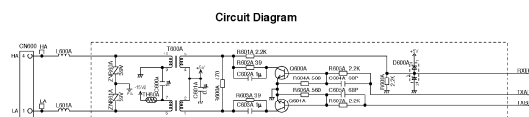
(d) Bell ringing section / When the telephone is a signal line telephone, extension calling is executed by means of a ringing signal. / When the ringing signal is supplied, RL60 turns ON and the current flows are as follows: / Bell transformer → ringing signal line → RL60 → L602 → telephone → L603 → RL60 → R632 → GND → Bell transformer /



//////////

4. APT/DPT Circuit

Composition: / Q600, Q601, T600 etc. / / Circuit Operation: / The circuit functions the wave shaping and the level conversion between the data line from the telephone terminal and the Gate Array (IC101), and supplies the current to the terminal through the data line. / The data communication is done through this circuit with any kinds of the terminal whichever APT of DPT. / This circuit consists of the drive circuit (Q600, Q601 etc.) and the transformer (T600). /



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5. Door phone Circuit

Door-Phone Interface Circuit is a circuit which functions the interface between the door-phone and the PCM highway, and is composed of the following circuits. / / Composition: / (a) Circuit for detection whether the door-phone is connected or not. / (b)

Current supply circuit / (c) Hook detection circuit / (d) 2-4 lines conversion circuit / (e) A/D and D/A conversion circuit (CODEC) IC118 /

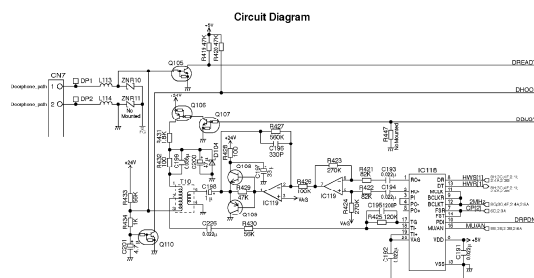
Circuit Operation: / (a) Circuit for detection whether the Door-Phone is connected or not. / When the Door-Phone is not connected, base of Q105 is high. When corrector of Q105 is low, input pin of G/A (IC101) is low. When the Door-Phone is connected, base of Q105 is low. When corrector of Q105 is high, input pin of G/A (IC101) is high. CPU(IC100) on 1AP gets information through IC101 whether the Door-Phone is connected or not. /

(b) Current Supply Circuit / Q106 supplies current to the Door-Phone line through the transformer (T10). /

(c) Hook Detection Circuit / When the call button of Door-Phone isn't pushed, base of Q110 is high. When corrector of Q110 is low, input pin of G/A(IC101) is low. When the call button of Door-Phone is pushed, base of Q110 is low. When corrector of Q110 is high, input pin of IC101 is high. CPU(IC100) on 1AP gets information through IC101 whether the call button is pushed or not. /

(d) 2-4 Lines Conversion Circuit / This circuit converts 2-line analogue signals to 4-line signals. /

(e) A/D, D/A Conversion Circuit / This circuit is for converting the analogue signals from Door-Phone to the PCM digital signals to present to the PCM highway, and also converting the data on the PCM highway into the analogue signals to the Door-Phone. This circuit has the power down function and the u/A conversion function. /



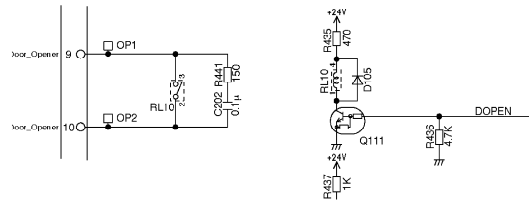
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6. Door Opener Circuit

This is the relay circuit which controls the Door Opener

connected externally. The control is made by the "DOPEN" signal. One of this circuit are installed on a card. / / Circuit Operation: / When CPU (IC100) make the "DOPEN" signal high, transistor (Q111) controls the relay (RL10) ON. When CPU (IC100) make the "DOPEN" signal low, transistor controls the relay OFF.

Circuit Diagram

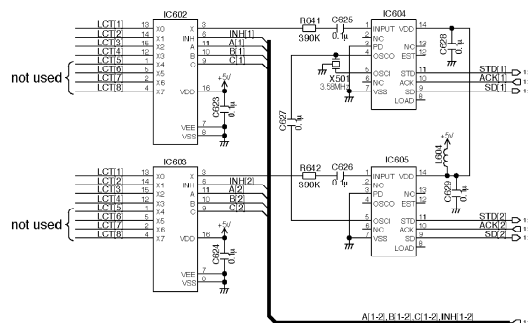


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7. DTMF Receiver Circuit

Composition: / DTMF Receiver IC (IC604, IC605) / 4 to 1 Analogue Switches (IC602, IC603) / / Circuit Operation: / DTMF Receiver Circuit is a circuit for receiving the DTMF dials presented by SLT. / This circuit is composed of the 4 to 1 Analogue Switches (IC602, IC603) and the DTMF Receiver IC (IC604, IC605). / This circuit is incorporated two lines on one card, each line is connected through the four extensions and the analogue switches (IC602, IC603) to the DTMF receiver IC (IC604, IC605). / The received data of DTMF receiver are read through the data bus by the main CPU (IC100). /

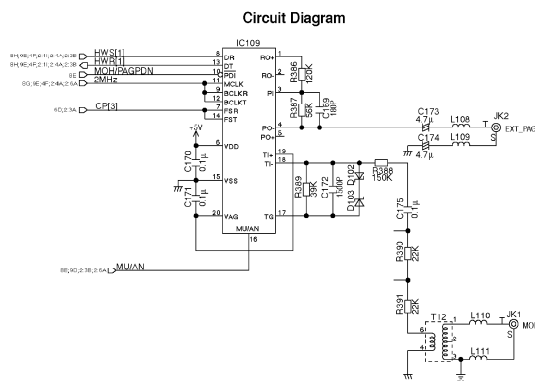
Circuit Diagram



8. Paging and Monitor Circuit

Composition: / CODEC IC (IC109), T12 etc. / / Circuit Operation: / The External Hold Tone Circuit is a circuit which presents the hold tone for the system. The analogue signals from the tone sources are changed to the digital ones by CODEC IC (IC109) and

presented to HWR1 of the up highway. /



///

9. Back-Up Circuit

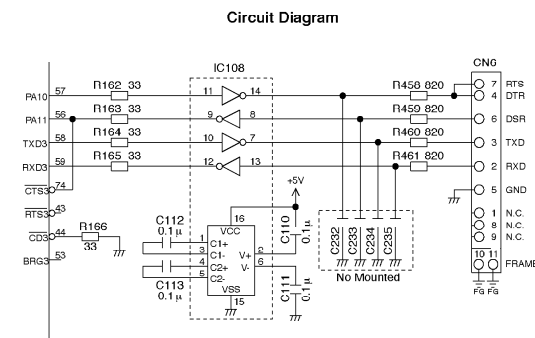
Composition: / BAT etc. / / Circuit Operation: / The real time clock in the Gate Array and RAM are backed up by the lithium of secondary battery (BAT) for 7 years. /

10. Voltage Watching Circuit

Composition: / Reset IC (IC115) etc. / / Circuit Operation: / Voltage Watching Circuit is a security circuit which detects AC power off and +5V turn off. / If AC power is turned off, Power Supply Unit presents "Low" to I/O port in the CPU. / If +5V is turned off, Reset IC (IC115) presents "Low" to reset pin of Gate Array to reset the system. /

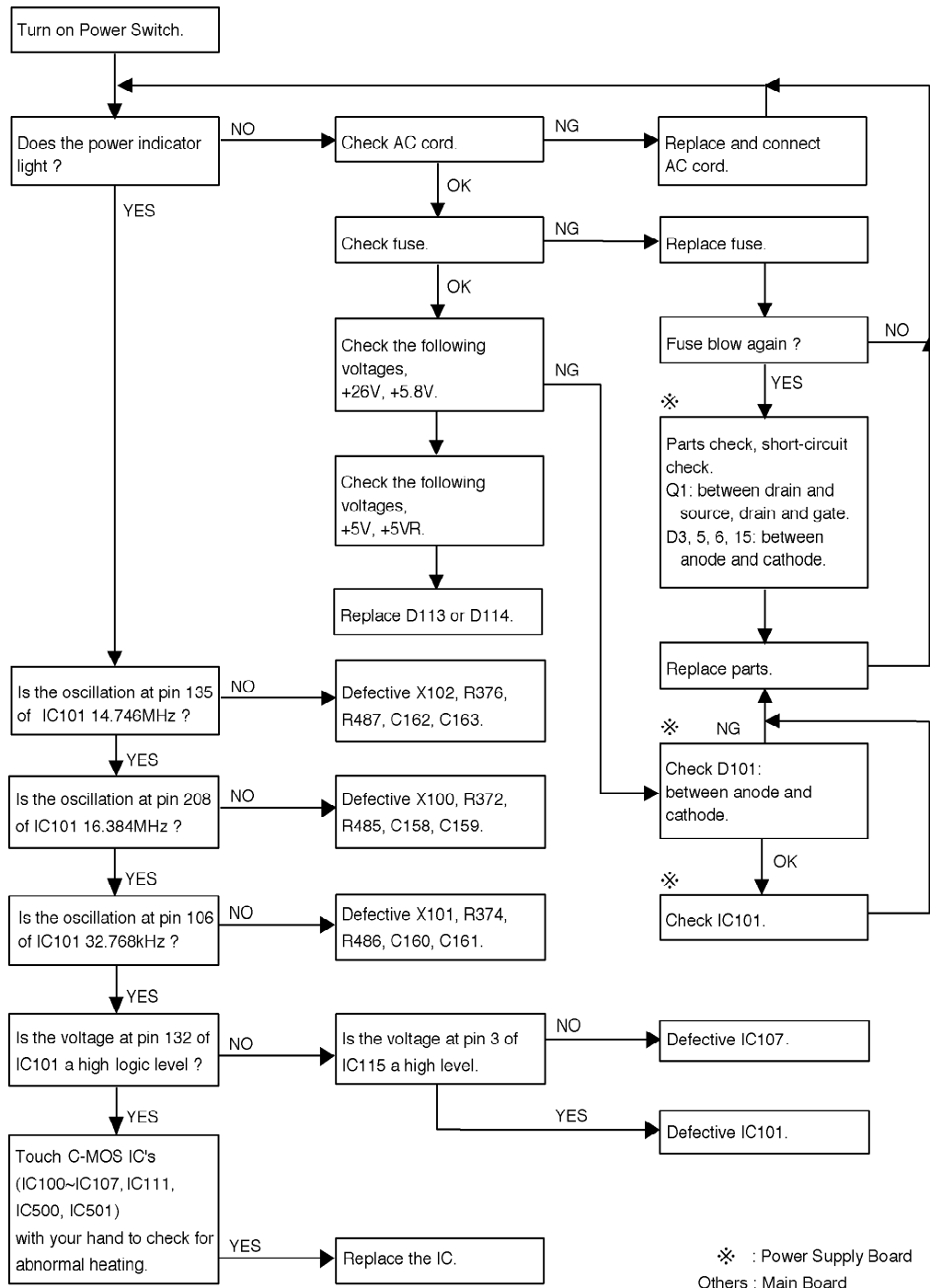
11. RS-232C Interface Circuit

**Composition: / CPU (IC100), Driver/Receiver IC (IC108) etc. /
Circuit Operation: / RS-232C Interface Circuit is a circuit for realizing the data transmission between CPU (IC100) and a Personal computer/printer, etc. This circuit consists of a serial interface built in CPU and the level conversion circuit. /**

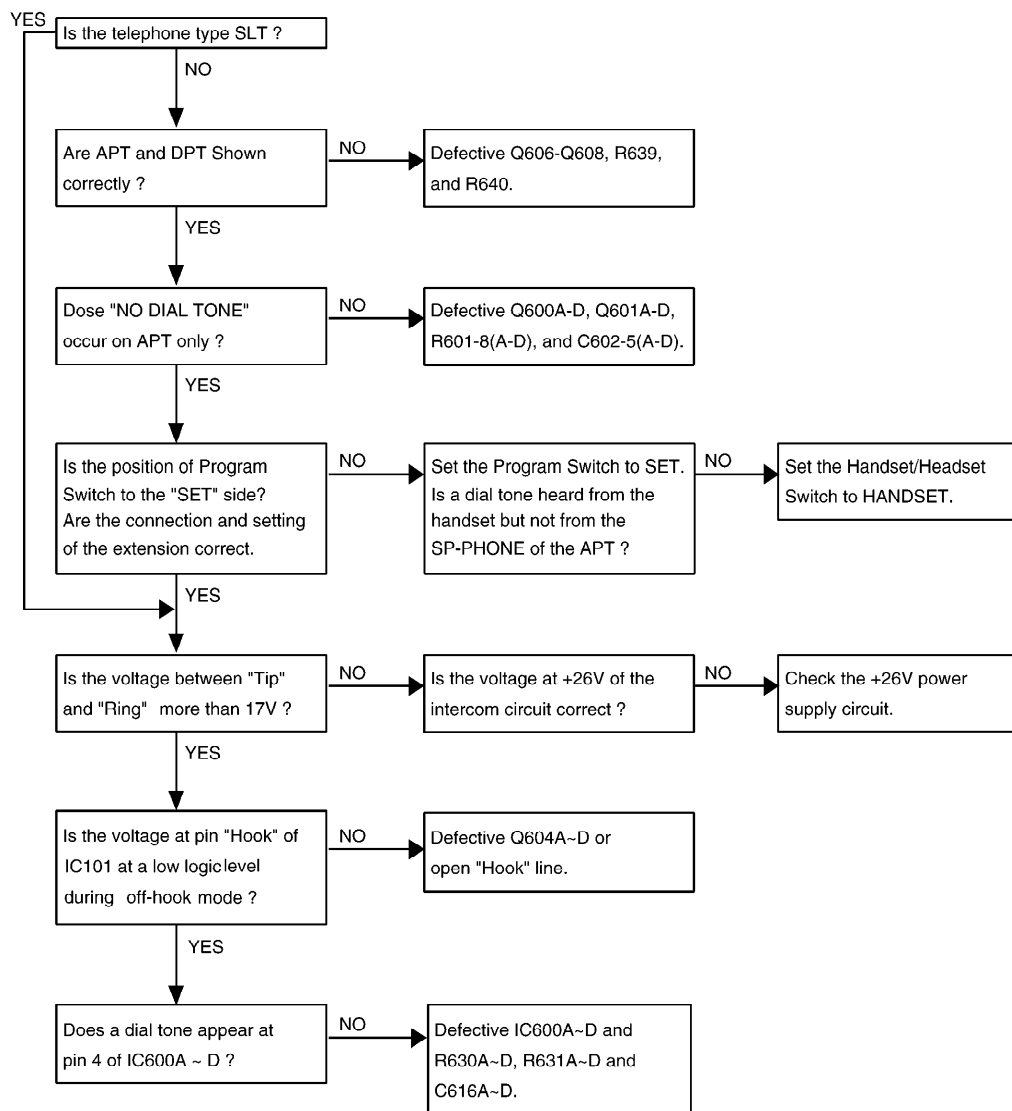


3. TROUBLESHOOTING GUIDE

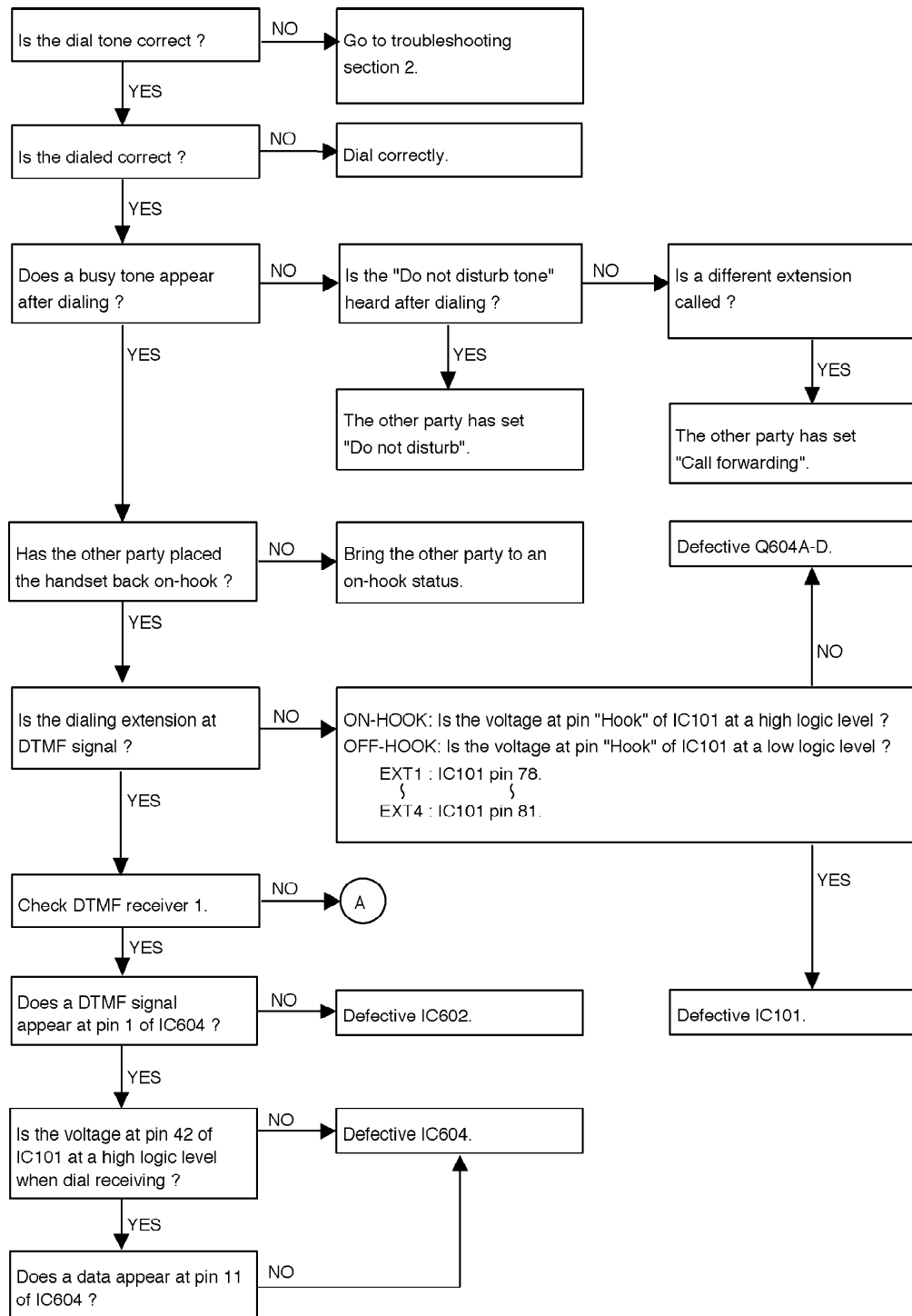
3.1. NO OPERATION (Check POWER SUPPLY BOARD, MAIN BOARD)

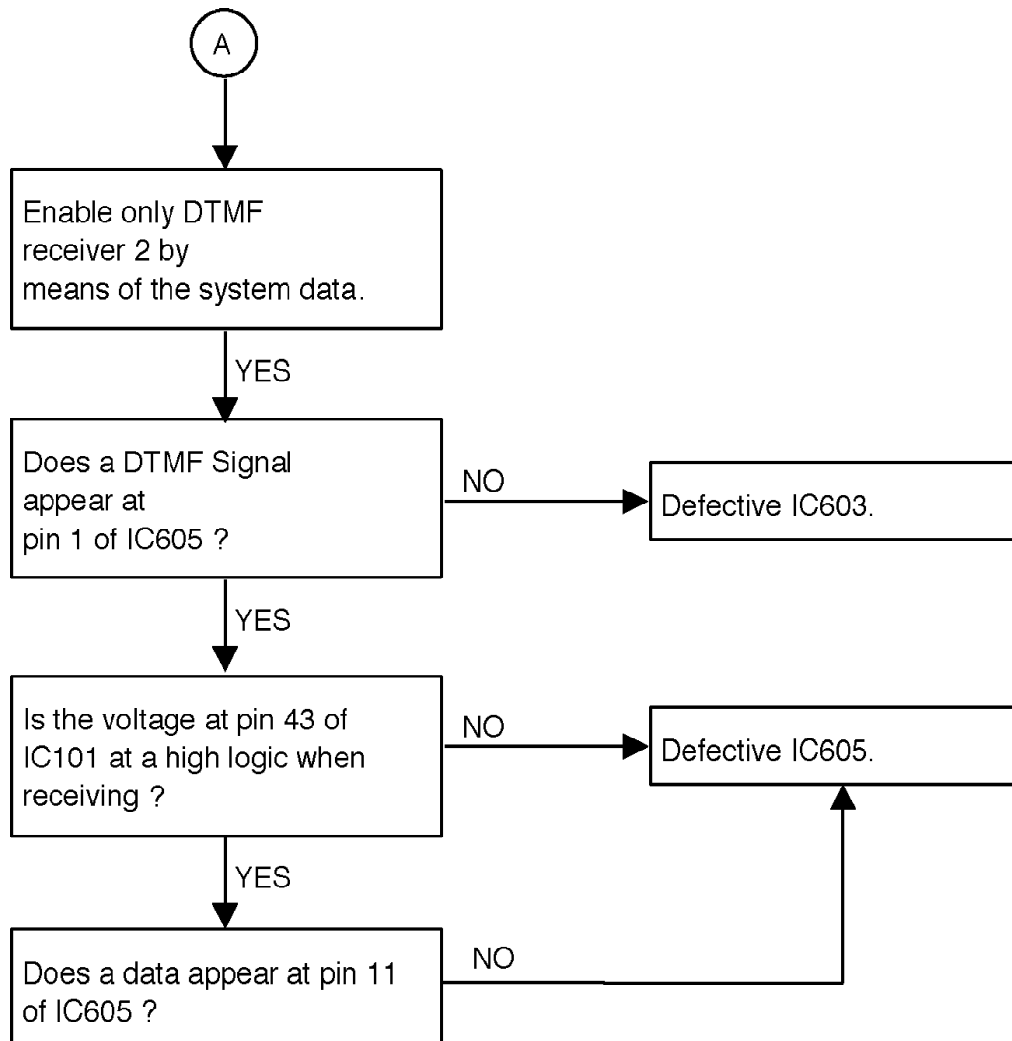


3.2. NO DIAL TONE (Check MAIN BOARD)

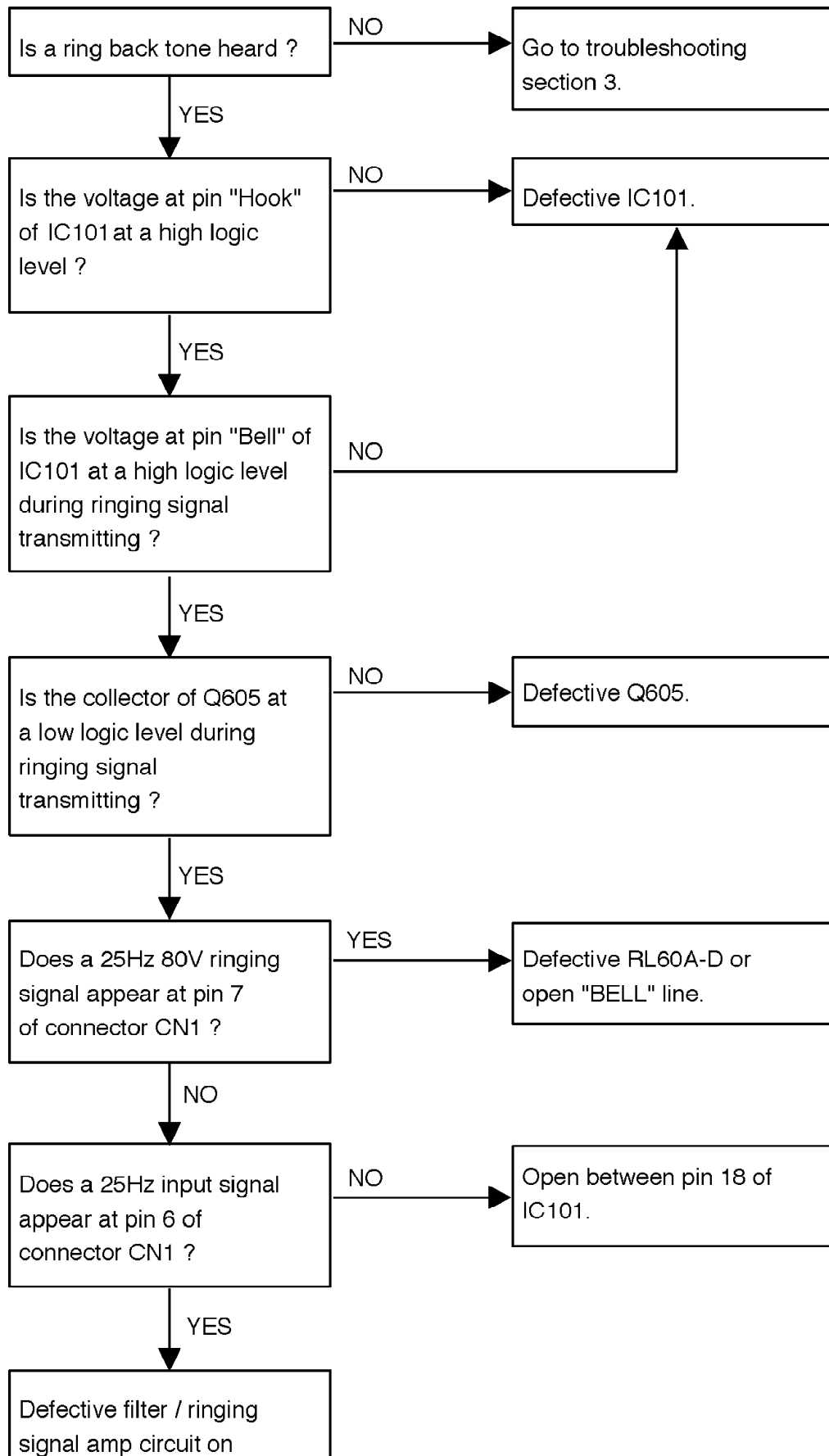


3.3. CAN NOT DIAL (Check MAIN BOARD)



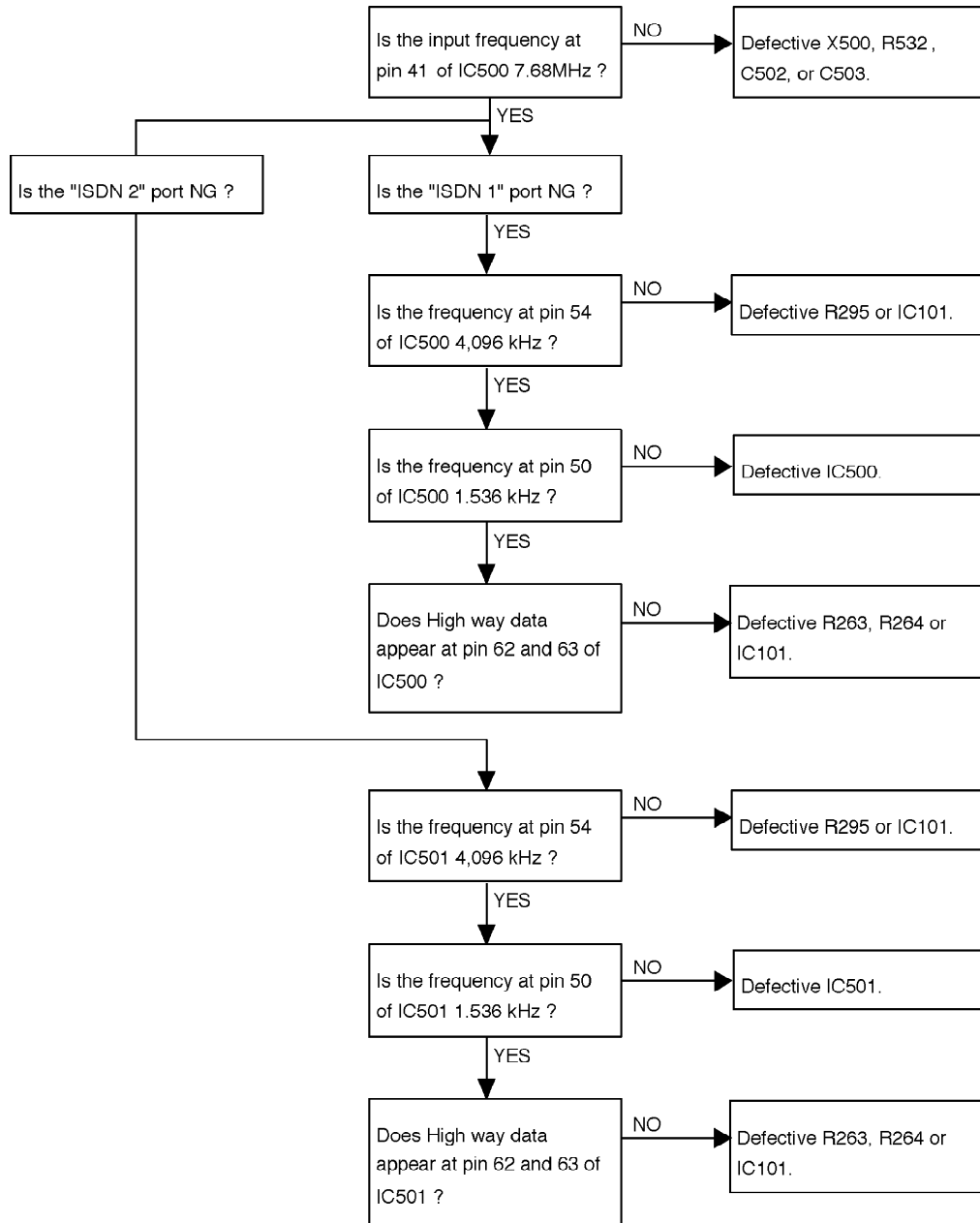


3.4. CAN NOT ACCESS AN EXTENSION (Check MAIN BOARD)



Signal amp circuit on
Power Supply Board.

3.5. CAN NOT ACCESS TO ISDN (Check MAIN BOARD)



4. SCHEMATIC DIAGRAM AND PRINTED CIRCUIT BOARD

4.1. SCHEMATIC DIAGRAM(MAIN)

4.2. SCHEMATIC DIAGRAM(MAIN)

5. PRINTED CIRCUIT BOARD

5.1. MAIN BOARD:COMPONENT VIEW_1

5.2. MAIN BOARD:COMPONENT VIEW_2

5.3. MAIN BOARD:BOTTOM VIEW_1

5.4. MAIN BOARD:BOTTOM VIEW_2

6. SCHEMATIC DIAGRAM AND PRINTED CIRCUIT BOARD

6.1. SCHEMATIC DIAGRAM (POWER UNIT)

7. PRINTED CIRCUIT BOARD

7.1. POWER UNIT:COMPONENT VIEW

8. SEVICE INFORMATION

If you do not have the special tools (for example: SPOT HEATER) to remove the SPOT HEATER'S Flat IC, If you have solder (large amount) a soldering iron and a cutter knife, you can easily remove IC's even though large than 100 pin.

8.1. HOW TO REPLACE THE FLAT PACKAGE IC

8.1.1. PREPARATION

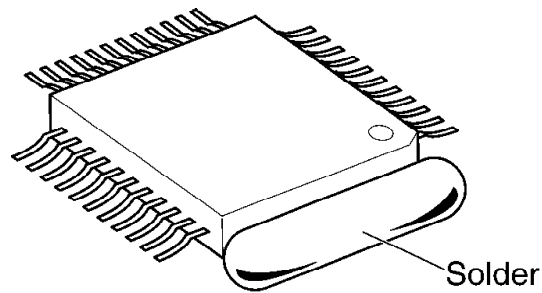
- SOLDER / Sparkle Solder 115A-1, 115B-1 or Almit Solder KR-19,KR-19RMA
- Soldering iron / Recommended power consumption is between 30 W to 40 W. / Temperature of Copper Rod $662 \pm 50^{\circ}\text{F}$ ($350 \pm 10^{\circ}\text{C}$) / (An expert may handle a 60~80 W iron, but beginner might damage foil by overheating.)
- Flux / HI115 Specific gravity 0.863 / (Original flux should be replaced daily.)

8.1.2. FLAT PACKAGE IC REMOVE PROCEDURE

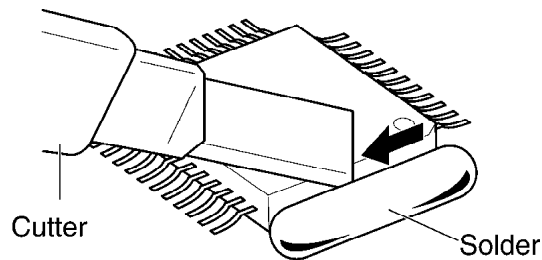
1. When all of the IC lead can not been seen at the standard degree, fill with large quantities of solder.

Note:

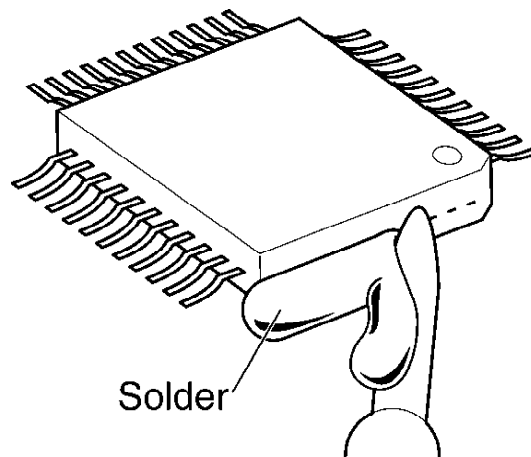
If you do not fill with solder and directly cut the IC lead with the cutter, stress may build up directly in the P.C.board's pattern. If you do not fill with large quantities of solder as in step 1 the P.C.board pattern may be removed.



2. Using a cutter, cut the lead at the source. (Cut the contents with the cutter lightly 5 or 6 times.)



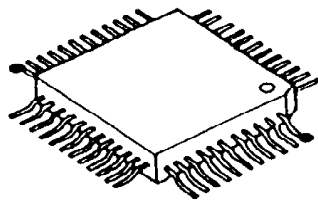
3. Remove when the solder melts. (Remove the lead at the same time.)



After removing the Flat IC and when attaching the new IC, remove any of the excess solder on the land using the soldering wire, etc. If the excess solder is not removed from the land, the IC will slip and not be attached properly.

8.1.3. FLAT PACKAGE IC INSTALLATION PROCEDURE

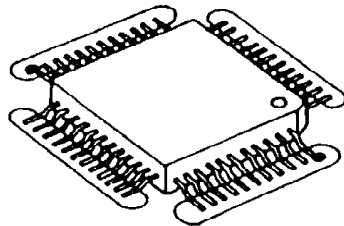
1. Temporary fix FLAT PACKAGE IC by soldering on two marked pins.



● - - - - - Temporary soldering point.

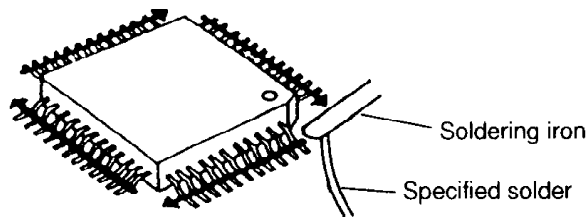
*Check the accuracy of the IC setting with the corresponding soldering foil.

2. Apply flux for all pins of FLAT PACKAGE IC.



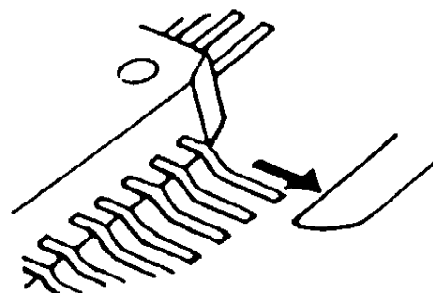
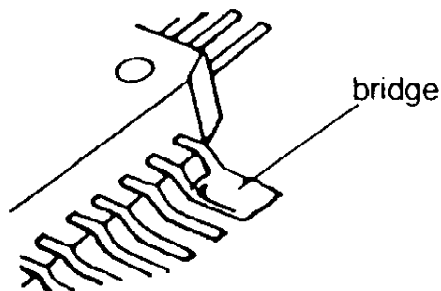
- - - - - Flux

3. Solder using the specified solder, in the direction of the arrow, by sliding the soldering iron.

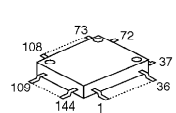
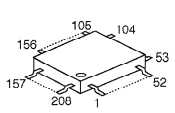
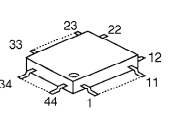
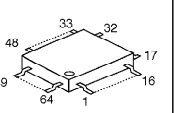
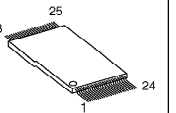
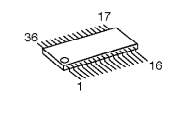
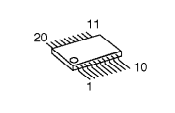
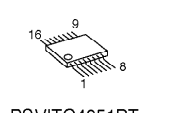

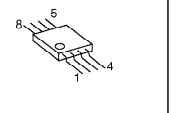
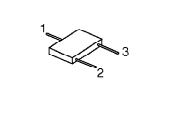
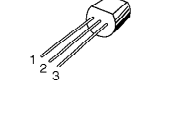
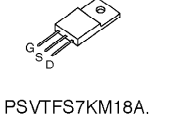
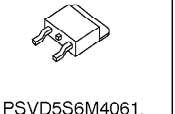
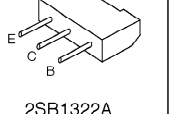
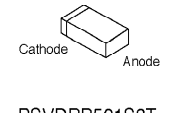
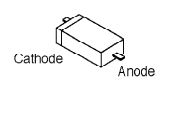
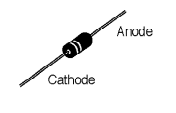
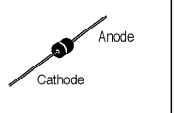
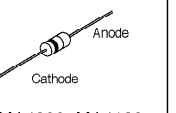
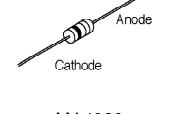
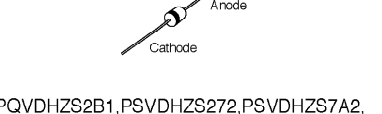

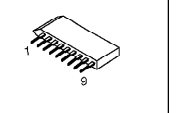
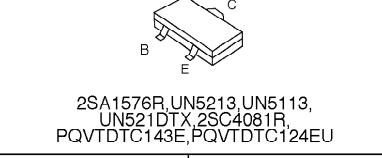
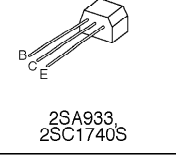
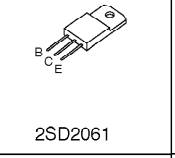
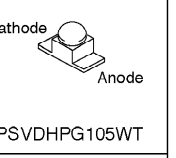
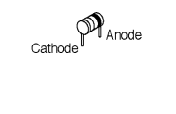

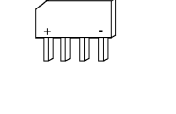
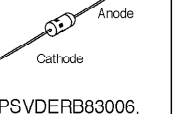
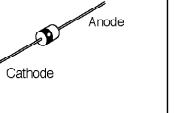
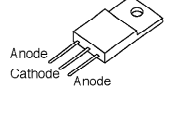
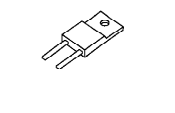
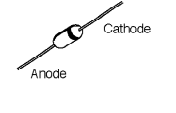


8.1.4. BRIDGE MODIFICATION PROCEDURE

1. Lightly re-solder the bridged portion.
2. Remove the remaining solder along pins using a soldering iron as shown in the figure below.



8.2. TERMINAL GUIDE OF ICS, TRANSISTORS AND DIODES

| | | | | |
|--|---|--|--|---|
|  PSVI68302FGL |  MN7A090Z9A |  PSVIXC9536AV |  PSVIPS2115F2 |  PSWI1TD612NE, PSVIMB9F4TEK, PSWI2TD612NE |
|  PSVICY62148F |  PSVIMC14548V |  PSVITC4051BT, PSVILT1381CS |  PSVISN7HT00A, PSVISNLV74AP, PQVILC73872M |  PSVIFA5311ST, PQVINJM2904V |
|  PSVIPS600CMT |  PSVIL5431 |  PSVTF57KM18A, 2SK1896 |  PSVD5S6M4061, 2SD1802 |  2SB1322A, 2SD1994A |
|  PSVDRB521S3T, MA110 |  PSVDUDZ20B |  PQVD10DF6 |  PQVDS5688G |  MA4200, MA4120, MA700A |
|  MA4068 |  PQVDHZS2B1, PSVDHZS272, PSVDHZS7A2, PSVDHZS12A2, PSVDHZS152, PSVDHZS202 | |  PQVILA6500, PSVIPQ1CF2 |  AN8021L |
|  2SA1576R, UN5213, UN5113, UN521DTX, 2SC4081R, PQVTDTC143E, PQVTDTC124EU | |  2SA933, 2SC1740S |  2SD2061 |  PSVDHPG105WT |
|  MA4180 |  MA143, PSVD1SS301TL, PSVD1SS300TL |  PQVDD3SBA60M |  PSVDERB83006, PSVDERA2206 |  PSVDERA1506 |
|  PSVDYG902C2R |  PSVDYG811S6R |  1SS133 | | |

8.3. IC DATA

8.3.1. CPU (IC100) PORT MAP

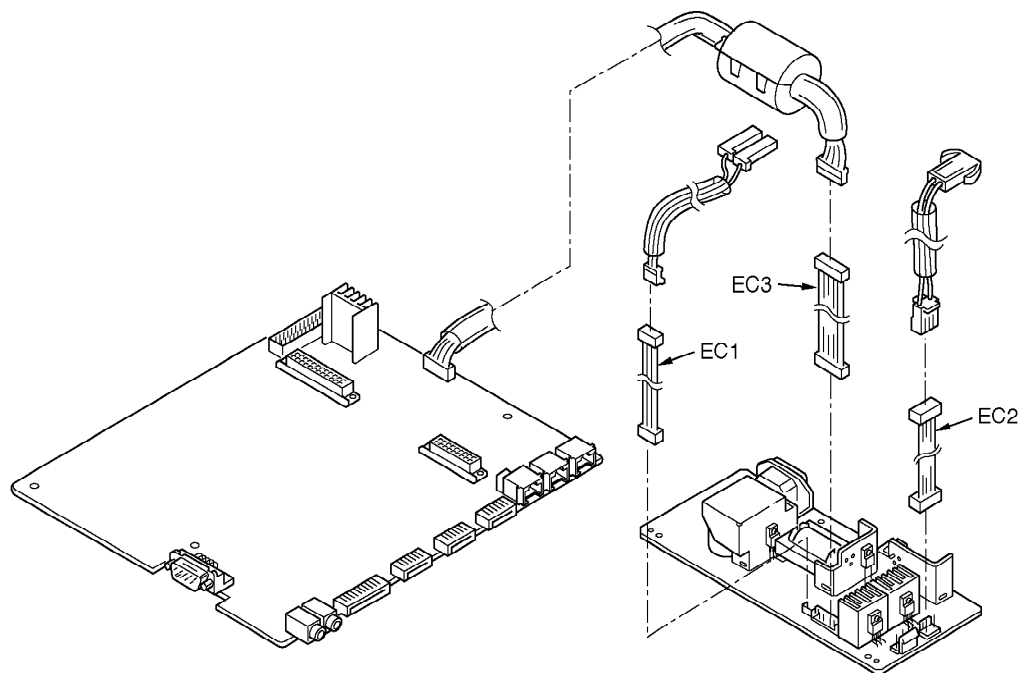
| Pin No. | Pin Name | I/O | Function | Operatic |
|---------|----------|-----|---------------------------|--------------------|
| 50 | DONEN | - | (Reserved) | - |
| 51 | DACKN | - | (Reserved) | - |
| 52 | DREQN | - | (Reserved) | - |
| 53 | BRG3 | - | (Reserved) | - |
| 56 | DSRN | I | DSRN(RS232C) | - |
| 57 | DTRN | O | DTRN(RS232C) | - |
| 58 | TXD3 | O | TXD(RS232C) | - |
| 59 | RXD3 | I | RXD(RS232C) | - |
| 61 | EX8PDN | O | CODEC(EXT8) Power Control | (not used) |
| 62 | EX7PDN | O | CODEC(EXT7) Power Control | (not used) |
| 63 | EX6PDN | O | CODEC(EXT6) Power Control | (not used) |
| 64 | EX5PDN | O | CODEC(EXT5) Power Control | (not used) |
| 67 | EX4PDN | O | CODEC(EXT4) Power Control | H: power on, L: p |
| 68 | EX3PDN | O | CODEC(EXT3) Power Control | H: power on, L: p |
| 69 | EX2PDN | O | CODEC(EXT2) Power Control | H: power on, L: p |
| 70 | EX1PDN | O | CODEC(EXT1) Power Control | H: power on, L: p |
| 139 | ACPDN | I | AC power down detection | H: normal, L: pow |
| 140 | USBCD | I | USB Option Card detection | H: detected, L: nc |
| 141 | UCDCD | I | Message Card detection | H: detected, L: nc |
| 142 | S/T2 | O | ISDN3 S/T mode | H: LT-T, L: LT-S |
| 143 | S/T1 | O | ISDN2 S/T mode | H: LT-T, L: LT-S |
| 2 | SRSTN#2 | O | ISDN3 Reset Control | H: normal, L: rese |
| 3 | SRSTN#1 | O | ISDN2 Reset Control | H: normal, L: rese |
| 4 | SRSTN#0 | O | ISDN1 Reset Control | H: normal, L: rese |
| 6 | - | I | Country Code 4 | - |
| 7 | - | I | Country Code 3 | - |
| 8 | - | I | Country Code 2 | - |
| 9 | - | I | Country Code 1 | - |

8.3.2. G/A(IC101) PORT MAP

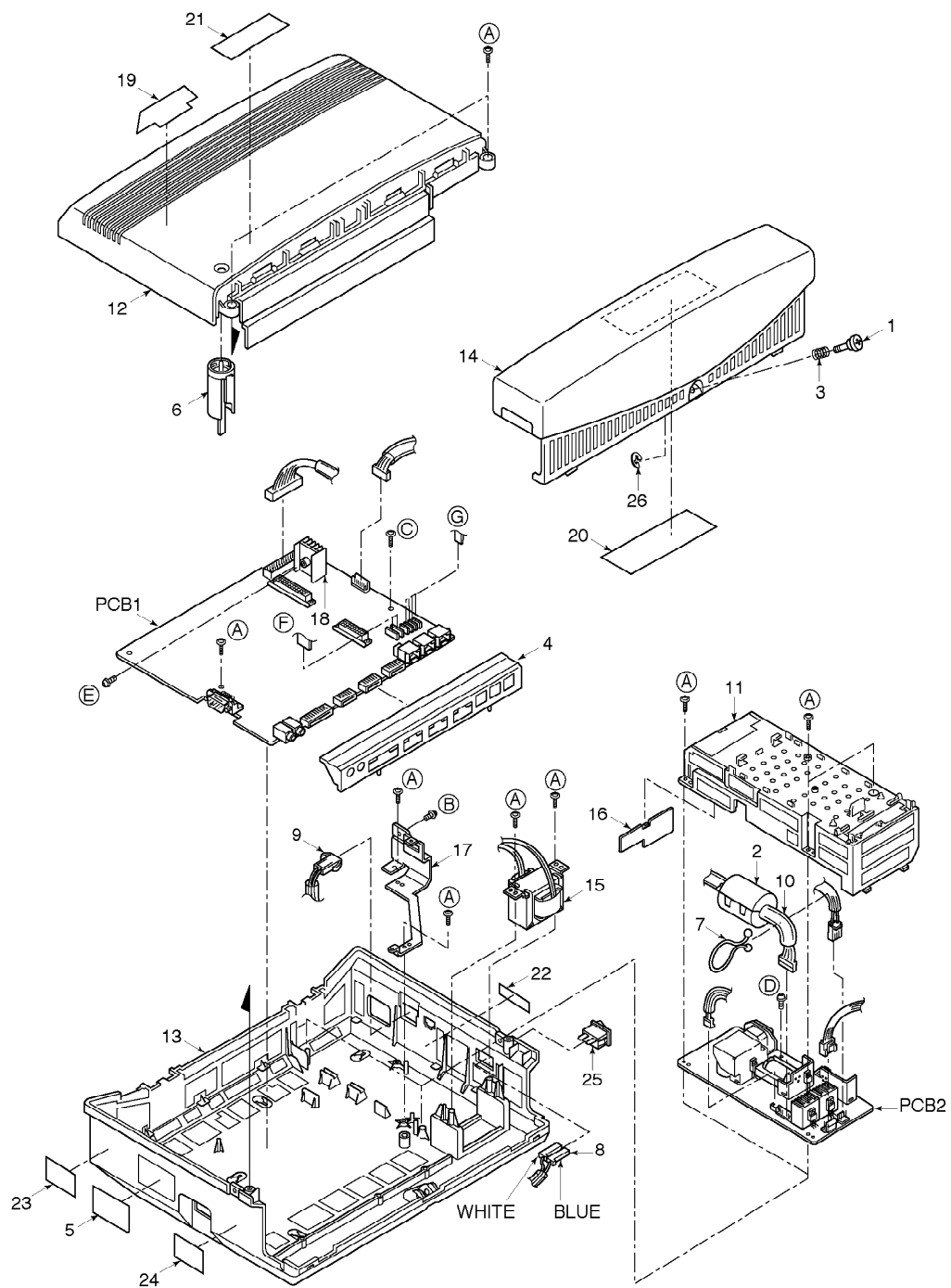
| Pin No. | Pin Name | I/O | Function | Operation |
|---------|--------------|-----|--------------------------------------|----------------------------------|
| 22 | DDRC SN | O | Doorphone / Door Opener Card Select | H: negate, L: assert |
| 21 | UCDC SN | O | Message Card Select | H: negate, L: assert |
| 20 | USBC SN | O | (Reserved) | - |
| 19 | USBINTN | I | (Reserved) | - |
| 18 | 25HZ | O | 25Hz Bell Signal Output | - |
| 17 | DCALARM | I | DC power down detection | H: normal, L: power down |
| 16 | SYSTEM CLEAR | I | System Clear input | H: normal, L: system clear |
| 15 | SYSTEM RESET | I | System Reset input | H: normal, L: system reset |
| 177 | AD7 | I/O | Address / Data 7 | (not used) |
| 175 | AD6 | I/O | Address / Data 6 | (not used) |
| 174 | AD5 | I/O | Address / Data 5 | (not used) |
| 173 | AD4 | I/O | Address / Data 4 | (not used) |
| 172 | AD3 | I/O | Address / Data 3 | (not used) |
| 171 | AD2 | I/O | Address / Data 2 | (not used) |
| 170 | AD1 | I/O | Address / Data 1 | (not used) |
| 169 | AD0 | I/O | Address / Data 0 | (not used) |
| 186 | S0CLK#1 | I | ISDN port 1 Clock | - |
| 185 | S0CLK#0 | I | ISDN port 1 Clock | - |
| 184 | ICLK | O | ISDN Clock | - |
| 183 | IFH1 | O | ISDN Frame Head Pulse | - |
| 181 | INT | I | ISDN Chip interrupt | H: normal, L: interrupt |
| 180 | S0CSNMA | O | ISDN Chip Select 1 | H: negate, L: assert |
| 179 | S0CSN#0 | O | ISDN Chip Select 0 | H: negate, L: assert |
| 178 | ALE | O | (Reserved) | - |
| 35 | DREADY | I | Door-phone Ready | H: connected, L: not connected |
| 34 | DHOOK | I | Door-phone hook detection | H: on-hook, L: off-hook |
| 33 | DRPDN | O | CODEC(for Door-phone) power control | H: power on, L: power down |
| 32 | SD2 | I | DTMF Receiver 2 data output | - |
| 31 | SD1 | I | DTMF Receiver 1 data output | - |
| 30 | ACK2 | O | DTMF Receiver 2 data shift pulse out | - |
| 29 | ACK1 | O | DTMF Receiver 1 data shift pulse out | - |
| 28 | LED | O | LED Control | H: LED on, L: LED off |
| 43 | STD2 | I | DTMF Receiver 2 data valid | H: data valid, L: data not valid |
| 42 | STD1 | I | DTMF Receiver 1 data valid | H: data valid, L: data not valid |
| 41 | MOH/PAG PDN | O | CODEC (MOH/PAG) Power Control | H: power on, L: power down |
| 40 | MU/AN | O | μ -low/A-low Control | H: μ -low, L: A-low |
| 39 | SRELAY | O | Secondary Ringer relay | H: relay on, L: relay off |
| 38 | ERELAY | O | External relay | H: relay on, L: relay off |
| 37 | DOPEN | O | Door Opener | H: relay on, L: relay off |
| 36 | DBUSY | O | Door Phone Power Control | H: power on, L: power down |

| Pin No. | Pin Name | I/O | Function | Operation |
|---------|----------|-----|--|--|
| 85 | HOOK8 | I | Off-Hook(EXT8) Detection | (not used) |
| 84 | HOOK7 | I | Off-Hook(EXT7) Detection | (not used) |
| 83 | HOOK6 | I | Off-Hook(EXT6) Detection | (not used) |
| 82 | HOOK5 | I | Off-Hook(EXT5) Detection | (not used) |
| 81 | HOOK4 | I | Off-Hook(EXT4) Detection | - |
| 80 | HOOK3 | I | Off-Hook(EXT3) Detection | - |
| 79 | HOOK2 | I | Off-Hook(EXT2) Detection | - |
| 78 | HOOK1 | I | Off-Hook(EXT1) Detection | - |
| 52 | BELL8 | O | Bell Relay(EXT8) Control | (not used) |
| 51 | BELL7 | O | Bell Relay(EXT7) Control | (not used) |
| 50 | BELL6 | O | Bell Relay(EXT6) Control | (not used) |
| 49 | BELL5 | O | Bell Relay(EXT5) Control | (not used) |
| 48 | BELL4 | O | Bell Relay(EXT4) Control | H: relay on, L: relay off |
| 47 | BELL3 | O | Bell Relay(EXT3) Control | H: relay on, L: relay off |
| 46 | BELL2 | O | Bell Relay(EXT2) Control | H: relay on, L: relay off |
| 45 | BELL1 | O | Bell Relay(EXT1) Control | H: relay on, L: relay off |
| 56 | DDR/COCD | I | Doorphone / Door Opener Card detection | H: detected, L: not detected |
| 57 | 1S0CD | I | 1-ISDN S0 Line Card detection | H: detected, L: not detected |
| 58 | MOHMUTE | O | Hold on Music control | H: External hold on music, L: internal hold on music |
| 59 | BR | O | PITS Power Control | H: power on, L: power off |

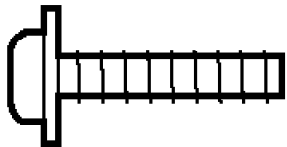
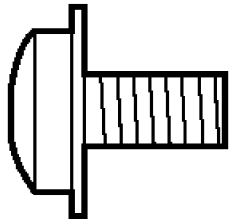
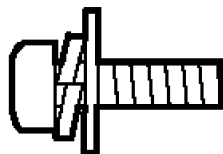
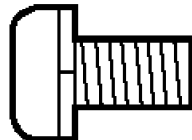
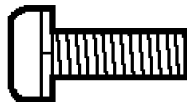
8.4. FIXTURES AND TOOLS



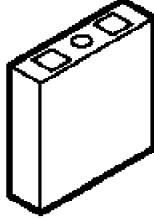

8.5. CABINET AND ELECTRICAL PARTS LOCATION



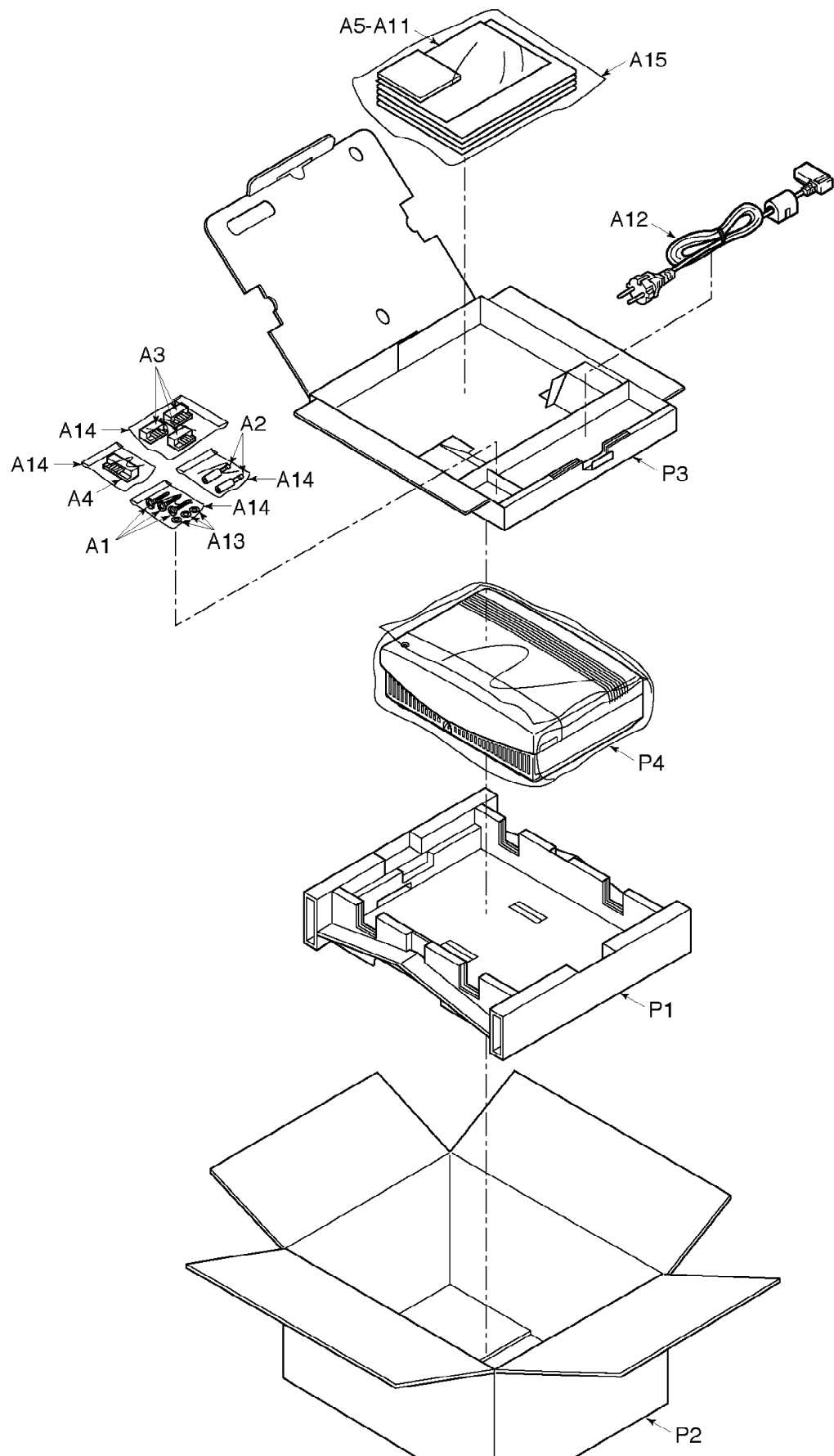
8.5.1. ACTUAL SIZE OF SCREWS

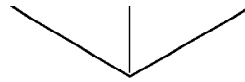
| Ref. No. | Part No. | Figure |
|-------------|------------|---|
| Ⓐ | XTW3+S12P |  |
| Ⓑ | XYM4+EP8BN |  |
| Ⓒ | XYN3+F8 |  |
| Ⓓ | XYN4+C8 |  |
| Ⓔ | XYN3+C8 |  |

8.5.2. SHORT PLUG

| Ref. No. | Part No. | Figure |
|-------------|------------|---|
| Ⓕ | PSJS02S09Z |  |
| Ⓖ | PSJS02S12Z |  |

8.6. ACCESSORIES AND PACKING MATERIALS





9. REPLACEMENT PARTS LIST

This replacement parts list is for KX-TD612NE only.

Refer to the simplified manual (cover) for other areas.

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.
2. Important safety notice / Components identified by \triangle mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors are in MICRO FARADS (μ F) P= μ μ F / *Type & Wattage of Resistor

| Type | | | | |
|---------------------|--------------------------------------|----------------|-------------|-------------|
| ERC:Solid | ERX:Metal Film | PQRD:Carbon | | |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse | | |
| PQ4R:Chip | ERO:Metal Film | ERF:Wire Wound | | |
| Wattage | | | | |
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W 5:5W |
| ECFD:Semi-Conductor | ECQD,ECKD,PQCBC,PQVP : Ceramic | | | |
| ECQS:Styrol | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester | | | |
| PQCBX,ECUV:Chip | ECEA,ECSZ,ECOS : Electrolytic | | | |
| ECMS:Mica | ECQP : Polypropylene | | | |
| Voltage | | | | |
| ECQ Type | ECQG FCQV Type | ECSZ Type | Others | |
| 1H : 50V | 05 : 50V | OF : 3.15V | OJ : 6.3V | 1V : 35V |
| 2A : 100V | 1 : 100V | 1A : 10V | 1A : 10V | 50,1H : 50V |
| 2E : 250V | 2 : 200V | 1V : 35V | 1C : 16V | 1J : 63V |
| 2H : 500V | | OJ : 6.3V | 1E,25 : 25V | 2A : 100V |

9.1. CABINET AND ELECTRICAL PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|------------|-------------------------------------|---------|
| | | CABINET AND ELECTRICAL PARTS | |
| | | | |
| | | | |
| <u>1</u> | PQHD10011X | SMALL SCREW, STEEL | |
| <u>2</u> | PQLB5F2 | CORE | |
| <u>3</u> | PQUS141Z | SPRING | |
| <u>4</u> | PSGG1017Z1 | GRILLE | S |
| <u>5</u> | PSGT1883Z | NAME PLATE | |
| <u>6</u> | PSHR1146Z | LED SPACER | |
| <u>7</u> | PSHR1218Z | CLAMPER | |
| <u>8</u> | PSJS02Q10Z | CONNECTOR, 2P | |
| <u>9</u> | PSJS02Q11Z | CONNECTOR, 2P | |
| | | | |
| <u>10</u> | PSJS07Q97Z | CONNECTOR, 7P | |
| <u>11</u> | PSKE1020Y1 | POWER UNIT COVER | S |
| <u>12</u> | PSKF1030V1 | UPPER CABINET | S |
| <u>13</u> | PSKM1056X1 | LOWER CABINET | S |
| <u>14</u> | PSKV1010Z1 | FRONT COVER | S |
| <u>15</u> | PSLT1K9M2A | TRANSFORMER, BELL | |
| <u>16</u> | PSMH1135Z | POWER METAL | |
| <u>17</u> | PSMH1151Z | FG PLATE | |
| <u>18</u> | PSMY1021Z | HEAT SINK | |
| <u>19</u> | PSQS1002Z | ISDN LABEL | |
| | | | |
| <u>20</u> | PSQT1789Z | CAUTION LABEL | |
| <u>21</u> | PSQT1535Z | CAUTION LABEL | |
| <u>22</u> | PSQT1749Z | CAUTION LABEL | |
| <u>23</u> | PSQT1750Z | CAUTION LABEL | |
| <u>24</u> | PSQT1779Z | CAUTION LABEL | |
| <u>25</u> | PSST2A003Z | SWITCH, POWER | |
| <u>26</u> | XUC3VW | RETAINING RING | |

9.2. ACCESSORIES AND PACKING MATERIALS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|------------|-------------|-----------------------------------|----------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| | | | |
| A1 | PQHE5004Z | TAPPING SCREW, STEEL | |
| A2 | PQJP1E1Z | PLUG | S |
| A3 | PSJS08S08Z | CONNECTOR, 8P | |
| A4 | PSJS10S07Z | CONNECTOR, 10P | |
| A5 | PSQW1480Z | LEAFLET for TEMPLATE | |
| A6 | PSQX1942Z | QUICK REFERENCE GUIDE | |
| A7 | PSQX1943Z | QUICK REFERENCE GUIDE | |
| | | | |
| A10 | PSQW1562Z | CE LEAFLET | |
| A11 | PSQX1970ZCD | CD-ROM | |
| A12 | PSWAT206SP | POWER CORD A'SSY | |
| A13 | XWG35FY | WASHER | |
| A14 | XZB05X08A03 | PROTECTION COVER | |
| A15 | XZB30X40A04 | PROTECTION COVER | |
| | | | |
| | | | |
| P1 | PSPD1143Z | CUSHION | |
| P2 | PSPK1737Z | PACKING CASE | |
| P3 | PSPN1089Z | INNER BOX | |
| P4 | PSPP1050Z | PROTECTION COVER | |

9.3. MAIN BOARD PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|--------------|--------------|-------------------------|----------|
| | | MAIN BOARD PARTS | |
| | | | |
| | | | |
| PCB1 | PSWP1TD612NE | MAIN BOARD ASS'Y (RTL) | |
| | | | |
| | | | |
| | | (ICS) | |
| IC100 | PSVI68302FGL | IC | |
| IC101 | MN7A090Z9A | IC | |
| IC102 | PSWI1TD612NE | IC ASS'Y | S |
| IC103 | PSWI2TD612NE | IC ASS'Y | S |
| IC104 | PSWI1TD612NE | IC ASS'Y | S |
| IC105 | PSWI2TD612NE | IC ASS'Y | S |
| IC106 | PSVICY62148F | IC | |
| IC107 | PSVICY62148F | IC | |
| IC108 | PSVILT1381CS | IC | |
| IC109 | PSVIMC14548V | IC | S |
| | | | |
| IC111 | PSVIXC9536AV | IC | |
| IC112 | PSVISN7HT00A | IC | |
| IC113 | PSVISN7HT00A | IC | |
| IC114 | PSVIFA5311ST | IC | |
| IC115 | PSVIPS600CMT | IC | |
| IC116 | PQVINJM2904V | IC | |
| IC117 | PQVINJM2904V | IC | |
| IC118 | PSVIMC14548V | IC | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC119 | PQVINJM2904V | IC | |
| | | | |
| IC121 | PSVISNLV74AP | IC | |
| IC122 | PSVIL5431T | IC | |
| | | | |
| IC500 | PSVIPS2115F2 | IC | |
| IC501 | PSVIPS2115F2 | IC | |
| IC505 | PSVISN7HT00A | IC | |
| | | | |
| IC600A | PSVIMC14548V | IC | S |
| IC600B | PSVIMC14548V | IC | S |
| IC600C | PSVIMC14548V | IC | S |
| IC600D | PSVIMC14548V | IC | S |
| IC602 | PSVITC4051BT | IC | |
| IC603 | PSVITC4051BT | IC | |
| IC604 | PQVILC73872M | IC | |
| IC605 | PQVILC73872M | IC | |
| | | | |
| | | | |
| | | (TRANSISTORS) | |
| Q100 | PQVTDTC143E | TRANSISTOR(SI) | |
| Q101 | 2SC4081R | TRANSISTOR(SI) | |
| Q102 | 2SC4081R | TRANSISTOR(SI) | |
| Q105 | UN521DTX | TRANSISTOR(SI) | |
| Q106 | UN5113 | TRANSISTOR(SI) | S |
| Q107 | UN5213 | TRANSISTOR(SI) | S |
| Q108 | 2SC4081R | TRANSISTOR(SI) | |
| Q109 | 2SA1576R | TRANSISTOR(SI) | |
| | | | |
| Q110 | PQVTDTC124EU | TRANSISTOR(SI) | |
| Q111 | PQVTDTC143E | TRANSISTOR(SI) | |
| Q112 | PQVTDTC143E | TRANSISTOR(SI) | |
| Q113 | PQVTDTC143E | TRANSISTOR(SI) | |
| Q114 | 2SK1896 | TRANSISTOR(SI) | |
| | | | |
| Q600A | 2SC4081R | TRANSISTOR(SI) | |
| Q600B | 2SC4081R | TRANSISTOR(SI) | |
| Q600C | 2SC4081R | TRANSISTOR(SI) | |
| Q600D | 2SC4081R | TRANSISTOR(SI) | |
| Q600E | 2SC4081R | TRANSISTOR(SI) | |
| Q600F | 2SC4081R | TRANSISTOR(SI) | |
| Q600G | 2SC4081R | TRANSISTOR(SI) | |
| Q600H | 2SC4081R | TRANSISTOR(SI) | |
| Q601A | 2SC4081R | TRANSISTOR(SI) | |
| Q601B | 2SC4081R | TRANSISTOR(SI) | |
| Q601C | 2SC4081R | TRANSISTOR(SI) | |
| Q601D | 2SC4081R | TRANSISTOR(SI) | |
| Q601E | 2SC4081R | TRANSISTOR(SI) | |
| Q601F | 2SC4081R | TRANSISTOR(SI) | |
| Q601G | 2SC4081R | TRANSISTOR(SI) | |
| Q601H | 2SC4081R | TRANSISTOR(SI) | |
| Q602A | 2SB1322 | TRANSISTOR(SI) | |
| Q602B | 2SB1322 | TRANSISTOR(SI) | |
| Q602C | 2SB1322 | TRANSISTOR(SI) | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| Q602D | 2SB1322 | TRANSISTOR(SI) | |
| Q603A | 2SD1994A | TRANSISTOR(SI) | |
| Q603B | 2SD1994A | TRANSISTOR(SI) | |
| Q603C | 2SD1994A | TRANSISTOR(SI) | |
| Q603D | 2SD1994A | TRANSISTOR(SI) | |
| Q604A | 2SC4081R | TRANSISTOR(SI) | |
| Q604B | 2SC4081R | TRANSISTOR(SI) | |
| Q604C | 2SC4081R | TRANSISTOR(SI) | |
| Q604D | 2SC4081R | TRANSISTOR(SI) | |
| Q605A | PQVTDTC143E | TRANSISTOR(SI) | |
| Q605B | PQVTDTC143E | TRANSISTOR(SI) | |
| Q605C | PQVTDTC143E | TRANSISTOR(SI) | |
| Q605D | PQVTDTC143E | TRANSISTOR(SI) | |
| Q606 | 2SD1802 | TRANSISTOR(SI) | |
| Q607 | UN5113 | TRANSISTOR(SI) | S |
| Q608 | UN5213 | TRANSISTOR(SI) | S |
| | | | |
| | | | |
| | | (DIODES) | |
| D100 | PSVDHPG105WT | LED | |
| D101 | MA4200 | DIODE(SI) | |
| D102 | PQVDHZS2B1 | DIODE(SI) | |
| D103 | PQVDHZS2B1 | DIODE(SI) | |
| D104 | MA4068 | DIODE(SI) | |
| D105 | MA110 | DIODE(SI) | |
| D106 | MA110 | DIODE(SI) | |
| D107 | MA110 | DIODE(SI) | |
| D108 | MA4120 | DIODE(SI) | |
| D109 | MA700A | DIODE(SI) | |
| | | | |
| D110 | PQVD10DF6 | DIODE(SI) | |
| D111 | PSVD5S6M4061 | DIODE(SI) | S |
| D113 | PQVDS5688G | DIODE(SI) | |
| D114 | PQVDS5688G | DIODE(SI) | |
| D115 | MA4180 | DIODE(SI) | |
| | | | |
| D500 | MA110 | DIODE(SI) | |
| D501 | PSVD1SS300TL | DIODE(SI) | |
| D502 | PSVD1SS301TL | DIODE(SI) | |
| D503 | PSVDUDZ20B | DIODE(SI) | S |
| D504 | MA110 | DIODE(SI) (| |
| D505 | PSVD1SS300TL | DIODE(SI) | |
| D506 | PSVD1SS301TL | DIODE(SI) | |
| D507 | PSVDUDZ20B | DIODE(SI) | S |
| D508 | MA110 | DIODE(SI) | |
| D509 | PSVD1SS300TL | DIODE(SI) | |
| | | | |
| D510 | PSVD1SS301TL | DIODE(SI) | |
| D511 | PSVDUDZ20B | DIODE(SI) | S |
| D512 | MA110 | DIODE(SI) | |
| D513 | PSVD1SS300TL | DIODE(SI) | |
| D514 | PSVD1SS301TL | DIODE(SI) | |
| D515 | PSVDUDZ20B | DIODE(SI) | S |
| | | | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D600A | MA143 | DIODE(SI) | |
| D600B | MA143 | DIODE(SI) | |
| D600C | MA143 | DIODE(SI) | |
| D600D | MA143 | DIODE(SI) | |
| D600E | MA143 | DIODE(SI) | |
| D600F | MA143 | DIODE(SI) | |
| D600G | MA143 | DIODE(SI) | |
| D600H | MA143 | DIODE(SI) | |
| D601A | PSVDUDZ20B | DIODE(SI) | S |
| D601B | PSVDUDZ20B | DIODE(SI) | S |
| D601C | PSVDUDZ20B | DIODE(SI) | S |
| D601D | PSVDUDZ20B | DIODE(SI) | S |
| D602A | PSVDUDZ20B | DIODE(SI) | S |
| D602B | PSVDUDZ20B | DIODE(SI) | S |
| D602C | PSVDUDZ20B | DIODE(SI) | S |
| D602D | PSVDUDZ20B | DIODE(SI) | S |
| D603A | MA110 | DIODE(SI) | |
| D603B | MA110 | DIODE(SI) | |
| D603C | MA110 | DIODE(SI) | |
| D603D | MA110 | DIODE(SI) | |
| D604A | MA110 | DIODE(SI) | |
| D604B | MA110 | DIODE(SI) | |
| D604C | MA110 | DIODE(SI) | |
| D604D | MA110 | DIODE(SI) | |
| D605A | PSVDRB521S3T | DIODE(SI) | |
| D605B | PSVDRB521S3T | DIODE(SI) | |
| D605C | PSVDRB521S3T | DIODE(SI) | |
| D605D | PSVDRB521S3T | DIODE(SI) | |
| | | | |
| | | | |
| | | (BATTERY) | |
| BAT | CR23541VC | BATTERY | S |
| | | | |
| | | | |
| | | (CERAMIC FILTERS) | |
| FIL100 | PSVFNBMK181L | CERAMIC FILTER | |
| | | | |
| FIL500 | PSVFNBMK181L | CERAMIC FILTER | |
| FIL501 | PSVFNBMK181L | CERAMIC FILTER | |
| | | | |
| | | | |
| | | (COILS) | |
| L100 | PQLQR1T2R2M | COIL | |
| L101 | PQLQR1T2R2M | COIL | |
| L102 | PQLQR1T2R2M | COIL | |
| L103 | PQLQR1T2R2M | COIL | |
| L106 | ELC10E100 | COIL | |
| L107 | ELC10E100 | COIL | |
| L108 | PQLE106 | COIL | |
| L109 | PQLE106 | COIL | |
| | | | |
| L110 | PQLE106 | COIL | |
| L111 | PQLE106 | COIL | |
| L113 | PQLE106 | COIL | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| L114 | PQLE106 | COIL | |
| | | | |
| L500 | PQLQR1T2R2M | COIL | |
| L501 | PQLQR1T2R2M | COIL | |
| L504 | PQLQR2BT | COIL | S |
| L505 | PQLQR2BT | COIL | S |
| | | | |
| L600A | PQLE106 | COIL | |
| L600B | PQLE106 | COIL | |
| L600C | PQLE106 | COIL | |
| L600D | PQLE106 | COIL | |
| L600E | PQLE106 | COIL | |
| L600F | PQLE106 | COIL | |
| L600G | PQLE106 | COIL | |
| L600H | PQLE106 | COIL | |
| L601A | PQLE106 | COIL | |
| L601B | PQLE106 | COIL | |
| L601C | PQLE106 | COIL | |
| L601D | PQLE106 | COIL | |
| L601E | PQLE106 | COIL | |
| L601F | PQLE106 | COIL | |
| L601G | PQLE106 | COIL | |
| L601H | PQLE106 | COIL | |
| L602A | PQLE106 | COIL | |
| L602B | PQLE106 | COIL | |
| L602C | PQLE106 | COIL | |
| L602D | PQLE106 | COIL | |
| L603A | PQLE106 | COIL | |
| L603B | PQLE106 | COIL | |
| L603C | PQLE106 | COIL | |
| L603D | PQLE106 | COIL | |
| L604 | PQLQR1T2R2M | COIL | |
| | | | |
| R207 | PQLQR1RM601 | COIL | |
| R208 | PQLQR1RM601 | COIL | |
| R209 | PQLQR1RM601 | COIL | |
| | | | |
| R210 | PQLQR1RM601 | COIL | |
| R211 | PQLQR1RM601 | COIL | |
| R212 | PQLQR1RM601 | COIL | |
| R213 | PQLQR1RM601 | COIL | |
| R214 | PQLQR1RM601 | COIL | |
| R215 | PQLQR1RM601 | COIL | |
| R216 | PQLQR1RM601 | COIL | |
| R217 | PQLQR1RM601 | COIL | |
| R218 | PQLQR1RM601 | COIL | |
| R219 | PQLQR1RM601 | COIL | |
| | | | |
| R220 | PQLQR1RM601 | COIL | |
| R221 | PQLQR1RM601 | COIL | |
| R222 | PQLQR1RM601 | COIL | |
| R223 | PQLQR1RM601 | COIL | |
| R224 | PQLQR1RM601 | COIL | |
| R225 | PQLQR1RM601 | COIL | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R226 | PQLQR1RM601 | COIL | |
| R227 | PQLQR1RM601 | COIL | |
| R228 | PQLQR1RM601 | COIL | |
| R229 | PQLQR1RM601 | COIL | |
| | | | |
| R230 | PQLQR1RM601 | COIL | |
| R231 | PQLQR1RM601 | COIL | |
| R232 | PQLQR1RM601 | COIL | |
| R233 | PQLQR1RM601 | COIL | |
| R237 | PQLQR1RM601 | COIL | |
| R238 | PQLQR1RM601 | COIL | |
| R239 | PQLQR1RM601 | COIL | |
| | | | |
| R240 | PQLQR1RM601 | COIL | |
| R243 | PQLQR1RM601 | COIL | |
| R244 | PQLQR1RM601 | COIL | |
| R245 | PQLQR1RM601 | COIL | |
| | | | |
| R251 | PQLQR1RM601 | COIL | |
| R256 | PQLQR1RM601 | COIL | |
| R257 | PQLQR1RM601 | COIL | |
| R258 | PQLQR1RM601 | COIL | |
| R259 | PQLQR1RM601 | COIL | |
| | | | |
| R260 | PQLQR1RM601 | COIL | |
| R261 | PQLQR1RM601 | COIL | |
| | | | |
| R272 | PQLQR1RM601 | COIL | |
| R274 | PQLQR1RM601 | COIL | |
| R275 | PQLQR1RM601 | COIL | |
| R276 | PQLQR1RM601 | COIL | |
| R277 | PQLQR1RM601 | COIL | |
| R278 | PQLQR1RM601 | COIL | |
| | | | |
| R281 | PQLQR1RM601 | COIL | |
| | | | |
| R291 | PQLQR1RM601 | COIL | |
| R292 | PQLQR1RM601 | COIL | |
| R293 | PQLQR1RM601 | COIL | |
| R294 | PQLQR1RM601 | COIL | |
| R296 | PQLQR1RM601 | COIL | |
| R297 | PQLQR1RM601 | COIL | |
| | | | |
| R301 | PQLQR1RM601 | COIL | |
| R302 | PQLQR1RM601 | COIL | |
| R303 | PQLQR1RM601 | COIL | |
| R304 | PQLQR1RM601 | COIL | |
| R305 | PQLQR1RM601 | COIL | |
| R306 | PQLQR1RM601 | COIL | |
| R307 | PQLQR1RM601 | COIL | |
| R308 | PQLQR1RM601 | COIL | |
| R309 | PQLQR1RM601 | COIL | |
| | | | |
| R310 | PQLQR1RM601 | COIL | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R311 | PQLQR1RM601 | COIL | |
| R312 | PQLQR1RM601 | COIL | |
| R313 | PQLQR1RM601 | COIL | |
| R314 | PQLQR1RM601 | COIL | |
| R315 | PQLQR1RM601 | COIL | |
| R317 | PQLQR1RM601 | COIL | |
| R318 | PQLQR1RM601 | COIL | |
| R319 | PQLQR1RM601 | COIL | |
| | | | |
| R320 | PQLQR1RM601 | COIL | |
| R321 | PQLQR1RM601 | COIL | |
| R322 | PQLQR1RM601 | COIL | |
| R323 | PQLQR1RM601 | COIL | |
| R324 | PQLQR1RM601 | COIL | |
| R325 | PQLQR1RM601 | COIL | |
| R326 | PQLQR1RM601 | COIL | |
| R327 | PQLQR1RM601 | COIL | |
| R328 | PQLQR1RM601 | COIL | |
| R329 | PQLQR1RM601 | COIL | |
| | | | |
| R330 | PQLQR1RM601 | COIL | |
| R331 | PQLQR1RM601 | COIL | |
| R332 | PQLQR1RM601 | COIL | |
| R333 | PQLQR1RM601 | COIL | |
| R334 | PQLQR1RM601 | COIL | |
| R335 | PQLQR1RM601 | COIL | |
| R336 | PQLQR1RM601 | COIL | |
| R339 | PQLQR1RM601 | COIL | |
| | | | |
| R340 | PQLQR1RM601 | COIL | |
| R341 | PQLQR1RM601 | COIL | |
| R342 | PQLQR1RM601 | COIL | |
| R343 | PQLQR1RM601 | COIL | |
| R344 | PQLQR1RM601 | COIL | |
| R345 | PQLQR1RM601 | COIL | |
| R346 | PQLQR1RM601 | COIL | |
| R347 | PQLQR1RM601 | COIL | |
| R348 | PQLQR1RM601 | COIL | |
| R349 | PQLQR1RM601 | COIL | |
| | | | |
| R350 | PQLQR1RM601 | COIL | |
| R351 | PQLQR1RM601 | COIL | |
| R352 | PQLQR1RM601 | COIL | |
| R353 | PQLQR1RM601 | COIL | |
| R354 | PQLQR1RM601 | COIL | |
| R355 | PQLQR1RM601 | COIL | |
| R356 | PQLQR1RM601 | COIL | |
| R357 | PQLQR1RM601 | COIL | |
| R358 | PQLQR1RM601 | COIL | |
| R359 | PQLQR1RM601 | COIL | |
| | | | |
| R360 | PQLQR1RM601 | COIL | |
| R361 | PQLQR1RM601 | COIL | |
| R362 | PQLQR1RM601 | COIL | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R457 | PQLQR1RM601 | COIL | |
| R488 | PQLQR1RM601 | COIL | |
| | | | |
| | | (CONNECTORS) | |
| CN1 | PQJP7D68Z | CONNECTOR, 7P | |
| CN2 | PSJS48A93Z | CONNECTOR, 48P | |
| CN3 | PSJS44A94Z | CONNECTOR, 44P | |
| CN4 | PSJP30A62Z | CONNECTOR, 30P | |
| CN5 | PQJS06A15Z | CONNECTOR, 6P | |
| CN6 | PSJP09A64Z | CONNECTOR, 9P | |
| CN7 | PSJP09B10Z | CONNECTOR, 9P | |
| | | | |
| CN600 | PSJP08B06Z | CONNECTOR, 8P | |
| CN601 | PSJP08B06Z | CONNECTOR, 8P | |
| CN602 | PSJP08B06Z | CONNECTOR, 8P | |
| | | | |
| PLUG01 | PSJS02S09Z | CONNECTOR, 2P | |
| PLUG02 | PSJS02S09Z | CONNECTOR, 2P | |
| PLUG1 | PQJS02S12Z | CONNECTOR, 2P | |
| PLUG2 | PQJS02S12Z | CONNECTOR, 2P | |
| PLUG3 | PQJS02S12Z | CONNECTOR, 2P | |
| PLUG4 | PQJS02S12Z | CONNECTOR, 2P | |
| | | | |
| SW500 | PQJP03G47X | CONNECTOR, 3P | |
| SW501 | PQJP03G47X | CONNECTOR, 3P | |
| SW502 | PQJP03G47X | CONNECTOR, 3P | |
| SW503 | PQJP03G47X | CONNECTOR, 3P | |
| SW504 | PSJP03B12Z | CONNECTOR, 3P | |
| SW505 | PSJP03B12Z | CONNECTOR, 3P | |
| | | | |
| | | | |
| | | (CRYSTAL OSCILLATORS) | |
| X100 | PSVCC0025GT | CRYSTAL OSCILLATOR | |
| X101 | PSVCC0021CT | CRYSTAL OSCILLATOR | |
| X102 | PSVCC0040DT | CRYSTAL OSCILLATOR | |
| | | | |
| X500 | PSVCC0039DT | CRYSTAL OSCILLATOR | |
| X501 | PSVCYY0358M3 | CRYSTAL OSCILLATOR | S |
| | | | |
| | | | |
| | | (FUSE) | |
| F100 | PQBA1N20NMAL | FUSE | |
| | | | |
| | | | |
| | | (JACKS) | |
| CN500 | PSJJ1T002Z | JACK | |
| CN501 | PSJJ1T002Z | JACK | |
| CN502 | PSJJ1T002Z | JACK | |
| | | | |
| JK1 | PSJJ1D001Z | JACK | |
| JK2 | PSJJ1D001Z | JACK | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-----------------------------|---------|
| | | | |
| | | | |
| | | (PHOTO ELECTRIC TRANSDUCER) | |
| PC10 | 0N3181R | PHOTO ELECTRIC TRANSDUCER | |
| | | | |
| | | | |
| | | (SWITCHES) | |
| SW1 | EVQ21409K | SWITCH, RESET | |
| SW2 | ESD11V120 | SWITCH, CLEAR, NORMAL | |
| | | | |
| | | | |
| | | (TRANSFORMERS) | |
| T10 | PSLT8D7A | TRANSFORMER | |
| T11 | PSLT9H6CF1A | TRANSFORMER | |
| T12 | PSLT2D6A | TRANSFORMER | |
| | | | |
| T500 | PSLT9Z15A | TRANSFORMER | |
| T501 | PSLT9Z15A | TRANSFORMER | |
| | | | |
| T600A | PSLT9Z4A | TRANSFORMER | |
| T600B | PSLT9Z4A | TRANSFORMER | |
| T600C | PSLT9Z4A | TRANSFORMER | |
| T600D | PSLT9Z4A | TRANSFORMER | |
| T600E | PSLT9Z4A | TRANSFORMER | |
| T600F | PSLT9Z4A | TRANSFORMER | |
| T600G | PSLT9Z4A | TRANSFORMER | |
| T600H | PSLT9Z4A | TRANSFORMER | |
| | | | |
| | | | |
| | | (VARISTORS) | |
| SA500 | PSVDRA311PC6 | VARISTOR | |
| SA501 | PSVDRA311PC6 | VARISTOR | |
| SA502 | PSVDRA311PC6 | VARISTOR | |
| SA503 | PSVDRA311PC6 | VARISTOR | |
| SA504 | PSVDRA311PC6 | VARISTOR | |
| SA505 | PSVDRA311PC6 | VARISTOR | |
| SA506 | PSVDRA311PC6 | VARISTOR | |
| SA507 | PSVDRA311PC6 | VARISTOR | |
| SA508 | PSVDRA311PC6 | VARISTOR | |
| SA509 | PSVDRA311PC6 | VARISTOR | |
| | | | |
| SA510 | PSVDRA311PC6 | VARISTOR | |
| SA511 | PSVDRA311PC6 | VARISTOR | |
| SA512 | PSVDRA102MC6 | VARISTOR | |
| | | | |
| TH60A | PSVDRXE030-2 | VARISTOR | |
| TH60B | PSVDRXE030-2 | VARISTOR | |
| TH60C | PSVDRXE030-2 | VARISTOR | |
| TH60D | PSVDRXE030-2 | VARISTOR | |
| TH60E | PSVDRXE030-2 | VARISTOR | |
| TH60F | PSVDRXE030-2 | VARISTOR | |
| TH60G | PSVDRXE030-2 | VARISTOR | |
| TH60H | PSVDRXE030-2 | VARISTOR | |
| | | | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| ZNR10 | PQVDNV039D03 | VARISTOR | S |
| | | | |
| ZNR60A | PQVDNV039D03 | VARISTOR | S |
| ZNR60B | PQVDNV039D03 | VARISTOR | S |
| ZNR60C | PQVDNV039D03 | VARISTOR | S |
| ZNR60D | PQVDNV039D03 | VARISTOR | S |
| ZNR60E | PQVDNV039D03 | VARISTOR | S |
| ZNR60F | PQVDNV039D03 | VARISTOR | S |
| ZNR60G | PQVDNV039D03 | VARISTOR | S |
| ZNR60H | PQVDNV039D03 | VARISTOR | S |
| ZNR61A | PQVDNV039D03 | VARISTOR | S |
| ZNR61B | PQVDNV039D03 | VARISTOR | S |
| ZNR61C | PQVDNV039D03 | VARISTOR | S |
| ZNR61D | PQVDNV039D03 | VARISTOR | S |
| ZNR61E | PQVDNV039D03 | VARISTOR | S |
| ZNR61F | PQVDNV039D03 | VARISTOR | S |
| ZNR61G | PQVDNV039D03 | VARISTOR | S |
| ZNR61H | PQVDNV039D03 | VARISTOR | S |
| ZNR62A | PQVDNV039D03 | VARISTOR | S |
| ZNR62B | PQVDNV039D03 | VARISTOR | S |
| ZNR62C | PQVDNV039D03 | VARISTOR | S |
| ZNR62D | PQVDNV039D03 | VARISTOR | S |
| ZNR63A | PQVDNV039D03 | VARISTOR | S |
| ZNR63B | PQVDNV039D03 | VARISTOR | S |
| ZNR63C | PQVDNV039D03 | VARISTOR | S |
| ZNR63D | PQVDNV039D03 | VARISTOR | S |
| | | | |
| | | | |
| | | (RESISTORS) | |
| R101 | ERJ3GEYJ470 | 47 | |
| R102 | ERJ3GEYJ470 | 47 | |
| R103 | ERJ3GEYJ470 | 47 | |
| R104 | ERJ3GEYJ470 | 47 | |
| R105 | ERJ3GEYJ470 | 47 | |
| R106 | ERJ3GEYJ470 | 47 | |
| R107 | ERJ3GEYJ470 | 47 | |
| R108 | ERJ3GEYJ470 | 47 | |
| R109 | ERJ3GEYJ470 | 47 | |
| | | | |
| R110 | ERJ3GEYJ470 | 47 | |
| R111 | ERJ3GEYJ470 | 47 | |
| R112 | ERJ3GEYJ470 | 47 | |
| R113 | ERJ3GEYJ470 | 47 | |
| R114 | ERJ3GEYJ470 | 47 | |
| R115 | ERJ3GEYJ470 | 47 | |
| R116 | ERJ3GEYJ470 | 47 | |
| R117 | ERJ3GEYJ470 | 47 | |
| R118 | ERJ3GEYJ470 | 47 | |
| R119 | ERJ3GEYJ470 | 47 | |
| | | | |
| R120 | ERJ3GEYJ470 | 47 | |
| R121 | ERJ3GEYJ470 | 47 | |
| R122 | ERJ3GEYJ470 | 47 | |
| R123 | ERJ3GEYJ470 | 47 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R124 | ERJ3GEYJ330 | 33 | |
| R125 | ERJ3GEYJ330 | 33 | |
| R126 | ERJ3GEYJ330 | 33 | |
| R127 | ERJ3GEYJ330 | 33 | |
| R128 | ERJ3GEYJ330 | 33 | |
| R129 | ERJ3GEYJ330 | 33 | |
| | | | |
| R130 | ERJ3GEYJ330 | 33 | |
| R131 | ERJ3GEYJ330 | 33 | |
| R132 | ERJ3GEYJ330 | 33 | |
| R133 | ERJ3GEYJ473 | 47K | |
| R134 | ERJ3GEYJ473 | 47K | |
| R135 | ERJ3GEYJ473 | 47K | |
| R136 | ERJ3GEYJ473 | 47K | |
| R137 | ERJ3GEYJ473 | 47K | |
| R138 | ERJ3GEYJ473 | 47K | |
| R139 | ERJ3GEYJ473 | 47K | |
| | | | |
| R140 | ERJ3GEYJ472 | 4.7K | |
| R141 | ERJ3GEYJ330 | 33 | |
| R142 | ERJ3GEYJ330 | 33 | |
| R143 | ERJ3GEYJ330 | 33 | |
| R144 | ERJ3GEYJ330 | 33 | |
| R145 | ERJ3GEYJ330 | 33 | |
| R146 | ERJ3GEYJ330 | 33 | |
| R147 | ERJ3GEYJ330 | 33 | |
| R148 | ERJ3GEYJ330 | 33 | |
| R149 | ERJ3GEYJ473 | 47K | |
| | | | |
| R150 | ERJ3GEYJ473 | 47K | |
| R151 | ERJ3GEYJ473 | 47K | |
| R152 | ERJ3GEYJ330 | 33 | |
| R153 | ERJ3GEYJ330 | 33 | |
| R154 | ERJ3GEYJ330 | 33 | |
| R155 | ERJ3GEYJ330 | 33 | |
| R156 | ERJ3GEYJ330 | 33 | |
| R157 | ERJ3GEYJ473 | 47K | |
| R159 | ERJ3GEYJ473 | 47K | |
| | | | |
| R160 | ERJ3GEYJ473 | 47K | |
| R161 | ERJ3GEYJ330 | 33 | |
| R162 | ERJ3GEYJ330 | 33 | |
| R163 | ERJ3GEYJ330 | 33 | |
| R164 | ERJ3GEYJ330 | 33 | |
| R165 | ERJ3GEYJ330 | 33 | |
| R166 | ERJ3GEYJ330 | 33 | |
| R167 | ERJ3GEYJ473 | 47K | |
| R168 | ERJ3GEYJ473 | 47K | |
| R169 | ERJ3GEYJ473 | 47K | |
| | | | |
| R170 | ERJ3GEYJ473 | 47K | |
| R171 | ERJ3GEYJ330 | 33 | |
| R172 | ERJ3GEYJ473 | 47K | |
| R173 | ERJ3GEYJ473 | 47K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R174 | ERJ3GEYJ473 | 47K | |
| R176 | ERJ3GEYJ473 | 47K | |
| R177 | ERJ3GEYJ473 | 47K | |
| R178 | ERJ3GEYJ473 | 47K | |
| R179 | ERJ3GEYJ473 | 47K | |
| | | | |
| R180 | ERJ3GEYJ473 | 47K | |
| R181 | ERJ3GEYJ473 | 47K | |
| R182 | ERJ3GEYJ473 | 47K | |
| R183 | ERJ3GEYJ473 | 47K | |
| R184 | ERJ3GEYJ473 | 47K | |
| R185 | ERJ3GEYJ473 | 47K | |
| R186 | ERJ3GEYJ473 | 47K | |
| R187 | ERJ3GEYJ473 | 47K | |
| R188 | ERJ3GEYJ473 | 47K | |
| R189 | ERJ3GEYJ473 | 47K | |
| | | | |
| R190 | ERJ3GEYJ473 | 47K | |
| R191 | ERJ3GEYJ473 | 47K | |
| R192 | ERJ3GEYJ473 | 47K | |
| R193 | ERJ3GEYJ473 | 47K | |
| R194 | ERJ3GEYJ473 | 47K | |
| R195 | ERJ3GEYJ473 | 47K | |
| R196 | ERJ3GEYJ473 | 47K | |
| R197 | ERJ3GEYJ473 | 47K | |
| R198 | ERJ3GEYJ473 | 47K | |
| R199 | ERJ3GEYJ473 | 47K | |
| | | | |
| R200 | ERJ3GEYJ473 | 47K | |
| R201 | ERJ3GEYJ473 | 47K | |
| R202 | ERJ3GEYJ473 | 47K | |
| R203 | ERJ3GEYJ473 | 47K | |
| R204 | ERJ3GEYJ473 | 47K | |
| R205 | ERJ3GEYJ473 | 47K | |
| R206 | ERJ3GEYJ473 | 47K | |
| | | | |
| R234 | ERJ3GEYJ101 | 100 | |
| R235 | ERJ3GEYJ101 | 100 | |
| R236 | ERJ3GEYJ101 | 100 | |
| | | | |
| R241 | ERJ3GEYJ101 | 100 | |
| R242 | ERJ3GEYJ470 | 47 | |
| R246 | ERJ3GEYJ470 | 47 | |
| R247 | ERJ3GEYJ470 | 47 | |
| R248 | ERJ3GEYJ473 | 47K | |
| R249 | ERJ3GEYJ224 | 220K | |
| | | | |
| R250 | ERJ3GEYJ330 | 33 | |
| R252 | ERJ3GEYJ122 | 1.2K | |
| R253 | ERJ3GEYJ182 | 1.8K | |
| R254 | ERJ3GEYJ182V | 1.8K | |
| R255 | ERJ3GEYJ122 | 1.2K | |
| | | | |
| R262 | ERJ3GEYJ473 | 47K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R263 | ERJ3GEYJ330 | 33 | |
| R264 | ERJ3GEYJ330 | 33 | |
| R265 | ERJ3GEYJ330 | 33 | |
| R266 | ERJ3GEYJ330 | 33 | |
| R267 | ERJ3GEYJ330 | 33 | |
| R268 | ERJ3GEYJ330 | 33 | |
| R269 | ERJ3GEYJ272 | 2.7K | |
| | | | |
| R270 | ERJ3GEYJ103 | 10K | |
| R271 | ERJ3GEYJ103 | 10K | |
| R279 | ERJ3GEYJ470 | 47 | |
| | | | |
| R280 | ERJ3GEYJ470 | 47 | |
| R282 | ERJ3GEYJ473 | 47K | |
| R283 | ERJ3GEYJ473 | 47K | |
| R284 | ERJ3GEYJ473 | 47K | |
| R285 | ERJ3GEYJ473 | 47K | |
| R286 | ERJ3GEYJ473 | 47K | |
| R287 | ERJ3GEYJ473 | 47K | |
| R288 | ERJ3GEYJ473 | 47K | |
| R289 | ERJ3GEYJ473 | 47K | |
| | | | |
| R290 | ERJ3GEYJ470 | 47 | |
| R295 | ERJ3GEYJ470 | 47 | |
| R298 | ERJ3GEYJ330 | 33 | |
| R299 | ERJ3GEYJ103 | 10K | |
| | | | |
| R300 | ERJ3GEYJ473 | 47K | |
| | | | |
| R316 | ERJ3GEYJ473 | 47K | |
| | | | |
| R337 | ERJ3GEYJ473 | 47K | |
| R338 | ERJ3GEYJ473 | 47K | |
| | | | |
| R363 | ERJ3GEYJ473 | 47K | |
| R364 | ERJ3GEYJ473 | 47K | |
| R365 | ERJ3GEYJ473 | 47K | |
| R366 | ERJ3GEYJ473 | 47K | |
| R367 | ERJ3GEYJ473 | 47K | |
| R368 | ERJ3GEYJ473 | 47K | |
| R369 | ERJ3GEYJ473 | 47K | |
| | | | |
| R370 | ERJ3GEYJ473 | 47K | |
| R372 | ERJ3GEYJ221 | 220 | |
| R374 | ERJ3GEYJ104 | 100K | |
| R376 | ERJ3GEYJ221 | 220 | |
| R377 | ERJ3GEYJ103 | 10K | |
| R378 | ERJ3GEYJ223 | 22K | |
| R379 | ERJ3GEYJ472 | 4.7K | |
| | | | |
| R380 | ERJ3GEYJ683 | 68K | |
| R381 | ERJ3GEYJ102 | 1K | |
| R382 | PQ4R10XJ471 | 470 | S |
| R383 | ERJ3GEYJ473 | 47K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R384 | ERJ3GEYJ473 | 47K | |
| R385 | PQ4R10XJ472 | 4.7K | S |
| R386 | ERJ3GEYJ124 | 120K | |
| R387 | ERJ3GEYJ563 | 56K | |
| R388 | ERJ3GEYJ154 | 150K | |
| R389 | ERJ3GEYJ393 | 39K | |
| | | | |
| R390 | ERJ3GEYJ223 | 22K | |
| R391 | ERJ3GEYJ223 | 22K | |
| | | | |
| R400 | ERJ3GEYJ103 | 10K | |
| R401 | ERJ3GEYJ184 | 180K | |
| R402 | ERJ3GEYJ203 | 20K | |
| R403 | ERJ3GEYJ394 | 390K | |
| R404 | ERJ3GEYJ333 | 33K | |
| R405 | ERJ3GEYJ473 | 47K | |
| R406 | PQ4R10XJ681 | 680 | S |
| R407 | ERG1SJ471 | 470 | |
| R408 | PQRD12VJ103 | 10K | |
| R409 | PQ4R10XJ220 | 22 | S |
| | | | |
| R410 | ERX2SJR10 | 0.1 | |
| R411 | PQ4R10XJ122 | 1.2K | S |
| R412 | PQ4R10XJ512 | 5.1K | S |
| R414 | ERDS2TJ152 | 1.5K | |
| R415 | PQ4R10XJ223 | 22K | S |
| R416 | PQ4R10XJ104 | 100K | S |
| R417 | PQ4R10XJ104 | 100K | S |
| R418 | PQ4R10XJ123 | 12K | S |
| R419 | ERJ3GEYJ473 | 47K | |
| | | | |
| R420 | ERJ3GEYJ473 | 47K | |
| R421 | ERJ3GEYJ823 | 82K | |
| R422 | ERJ3GEYJ823 | 82K | |
| R423 | ERJ3GEYJ274 | 270K | |
| R424 | ERJ3GEYJ274 | 270K | |
| R425 | ERJ3GEYJ124 | 120K | |
| R426 | ERJ3GEYJ104 | 100K | |
| R427 | ERJ3GEYJ564 | 560K | |
| R428 | PQ4R10XJ101 | 100 | S |
| R429 | ERJ3GEYJ473 | 47K | |
| | | | |
| R430 | ERJ3GEYJ563 | 56K | |
| R431 | ERJ3GEYJ182V | 1.8K | |
| R432 | ERJ3GEYJ101 | 100 | |
| R433 | ERJ3GEYJ563 | 56K | |
| R434 | ERJ3GEYJ102 | 1K | |
| R435 | ERDS2TJ471 | 470 | |
| R436 | ERJ3GEYJ472 | 4.7K | |
| R437 | ERDS2TJ102 | 1K | |
| R438 | ERJ3GEYJ472 | 4.7K | |
| R439 | ERDS2TJ102 | 1K | |
| | | | |
| R440 | ERJ3GEYJ472 | 4.7K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R441 | ERJ14YJ151 | 150 | |
| R442 | ERJ14YJ151 | 150 | |
| R443 | ERJ14YJ151 | 150 | |
| R444 | ERJ14YJ151 | 150 | |
| R445 | ERJ3GEYJ330 | 33 | |
| R446 | ERJ3GEYJ330 | 33 | |
| R448 | ERJ3GEYJ473 | 47K | |
| R449 | ERJ3GEYJ473 | 47K | |
| | | | |
| R450 | ERJ3GEYJ473 | 47K | |
| R451 | ERJ3GEYJ473 | 47K | |
| R452 | ERJ3GEYJ473 | 47K | |
| R454 | ERJ3GEYJ470 | 47 | |
| R455 | ERJ3GEYJ473 | 47K | |
| R456 | ERJ3GEYJ473 | 47K | |
| R458 | ERJ3GEYJ821 | 820 | |
| R459 | ERJ3GEYJ821 | 820 | |
| | | | |
| R460 | ERJ3GEYJ821 | 820 | |
| R461 | ERJ3GEYJ821 | 820 | |
| | | | |
| R482 | ERJ3GEYJ470 | 47 | |
| R483 | ERJ3GEYJ470 | 47 | |
| R485 | ERJ3GEY0R00 | 0 | |
| R486 | ERJ3GEY0R00 | 0 | |
| R487 | ERJ3GEY0R00 | 0 | |
| R489 | ERJ3GEYJ473 | 47K | |
| | | | |
| R490 | ERJ3GEYJ473 | 47K | |
| R491 | ERJ3GEYJ473 | 47K | |
| R492 | ERJ3GEYJ473 | 47K | |
| R493 | ERJ3GEYJ330 | 33 | |
| R494 | ERJ3GEYJ101 | 100 | |
| R495 | ERJ3GEYJ101 | 100 | |
| R496 | ERJ3GEYJ101 | 100 | |
| R497 | ERJ3GEYJ101 | 100 | |
| R498 | ERJ3GEYJ101 | 100 | |
| R499 | ERJ3GEYJ101 | 100 | |
| | | | |
| R500 | ERDS2TJ101 | 100 | |
| R501 | ERDS2TJ101 | 100 | |
| R502 | ERDS2TJ101 | 100 | |
| R503 | ERDS2TJ101 | 100 | |
| R504 | ERJ3GEYJ390 | 39 | |
| R505 | ERJ3GEYJ390 | 39 | |
| R506 | ERJ3GEYJ182V | 1.8K | |
| R507 | ERJ3GEYJ182V | 1.8K | |
| R508 | ERJ3GEYJ390 | 39 | |
| R509 | ERJ3GEYJ390 | 39 | |
| | | | |
| R510 | ERJ3GEYJ182V | 1.8K | |
| R511 | ERJ3GEYJ182V | 1.8K | |
| R512 | ERJ3GEYJ272 | 2.7K | |
| R513 | ERJ3GEYJ272 | 2.7K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R514 | ERJ3GEYJ473 | 47K | |
| R515 | ERJ3GEYJ473 | 47K | |
| R516 | ERJ3GEYJ101 | 100 | |
| R517 | ERJ3GEYJ272 | 2.7K | |
| R518 | ERJ3GEYJ272 | 2.7K | |
| R519 | ERJ3GEYJ473 | 47K | |
| | | | |
| R520 | ERJ3GEYJ101 | 100 | |
| R521 | ERJ3GEYJ473 | 47K | |
| R522 | ERJ3GEYJ473 | 47K | |
| R523 | ERJ3GEYJ473 | 47K | |
| R524 | ERJ3GEYJ822 | 8.2K | |
| R525 | ERJ3GEYJ822 | 8.2K | |
| R526 | ERJ3GEYJ822 | 8.2K | |
| R527 | ERJ3GEYJ822 | 8.2K | |
| R528 | ERJ3GEYJ473 | 47K | |
| | | | |
| R532 | ERJ3GEYJ821 | 820 | |
| | | | |
| R600A | ERJ3GEYJ471 | 470 | |
| R600B | ERJ3GEYJ471 | 470 | |
| R600C | ERJ3GEYJ471 | 470 | |
| R600D | ERJ3GEYJ471 | 470 | |
| R600E | ERJ3GEYJ471 | 470 | |
| R600F | ERJ3GEYJ471 | 470 | |
| R600G | ERJ3GEYJ471 | 470 | |
| R600H | ERJ3GEYJ471 | 470 | |
| R601A | ERJ3GEYJ222 | 2.2K | |
| R601B | ERJ3GEYJ222 | 2.2K | |
| R601C | ERJ3GEYJ222 | 2.2K | |
| R601D | ERJ3GEYJ222 | 2.2K | |
| R601E | ERJ3GEYJ222 | 2.2K | |
| R601F | ERJ3GEYJ222 | 2.2K | |
| R601G | ERJ3GEYJ222 | 2.2K | |
| R601H | ERJ3GEYJ222 | 2.2K | |
| R602A | PQ4R10XJ390 | 39 | S |
| R602B | PQ4R10XJ390 | 39 | S |
| R602C | PQ4R10XJ390 | 39 | S |
| R602D | PQ4R10XJ390 | 39 | S |
| R602E | PQ4R10XJ390 | 39 | S |
| R602F | PQ4R10XJ390 | 39 | S |
| R602G | PQ4R10XJ390 | 39 | S |
| R602H | PQ4R10XJ390 | 39 | S |
| R603A | PQ4R10XJ390 | 39 | S |
| R603B | PQ4R10XJ390 | 39 | S |
| R603C | PQ4R10XJ390 | 39 | S |
| R603D | PQ4R10XJ390 | 39 | S |
| R603E | PQ4R10XJ390 | 39 | S |
| R603F | PQ4R10XJ390 | 39 | S |
| R603G | PQ4R10XJ390 | 39 | S |
| R603H | PQ4R10XJ390 | 39 | S |
| R604A | ERJ3GEYJ561 | 560 | |
| R604B | ERJ3GEYJ561 | 560 | |
| R604C | ERJ3GEYJ561 | 560 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R604D | ERJ3GEYJ561 | 560 | |
| R604E | ERJ3GEYJ561 | 560 | |
| R604F | ERJ3GEYJ561 | 560 | |
| R604G | ERJ3GEYJ561 | 560 | |
| R604H | ERJ3GEYJ561 | 560 | |
| R605A | ERJ3GEYJ222 | 2.2K | |
| R605B | ERJ3GEYJ222 | 2.2K | |
| R605C | ERJ3GEYJ222 | 2.2K | |
| R605D | ERJ3GEYJ222 | 2.2K | |
| R605E | ERJ3GEYJ222 | 2.2K | |
| R605F | ERJ3GEYJ222 | 2.2K | |
| R605G | ERJ3GEYJ222 | 2.2K | |
| R605H | ERJ3GEYJ222 | 2.2K | |
| R606A | ERJ3GEYJ561 | 560 | |
| R606B | ERJ3GEYJ561 | 560 | |
| R606C | ERJ3GEYJ561 | 560 | |
| R606D | ERJ3GEYJ561 | 560 | |
| R606E | ERJ3GEYJ561 | 560 | |
| R606F | ERJ3GEYJ561 | 560 | |
| R606G | ERJ3GEYJ561 | 560 | |
| R606H | ERJ3GEYJ561 | 560 | |
| R607A | ERJ3GEYJ222 | 2.2K | |
| R607B | ERJ3GEYJ222 | 2.2K | |
| R607C | ERJ3GEYJ222 | 2.2K | |
| R607D | ERJ3GEYJ222 | 2.2K | |
| R607E | ERJ3GEYJ222 | 2.2K | |
| R607F | ERJ3GEYJ222 | 2.2K | |
| R607G | ERJ3GEYJ222 | 2.2K | |
| R607H | ERJ3GEYJ222 | 2.2K | |
| R608A | ERJ3GEYJ222 | 2.2K | |
| R608B | ERJ3GEYJ222 | 2.2K | |
| R608C | ERJ3GEYJ222 | 2.2K | |
| R608D | ERJ3GEYJ222 | 2.2K | |
| R608E | ERJ3GEYJ222 | 2.2K | |
| R608F | ERJ3GEYJ222 | 2.2K | |
| R608G | ERJ3GEYJ222 | 2.2K | |
| R608H | ERJ3GEYJ222 | 2.2K | |
| R609A | ERJ3GEYJ103 | 10K | |
| R609B | ERJ3GEYJ103 | 10K | |
| R609C | ERJ3GEYJ103 | 10K | |
| R609D | ERJ3GEYJ103 | 10K | |
| | | | |
| R610A | PQ4R10XJ470 | 47 | S |
| R610B | PQ4R10XJ470 | 47 | S |
| R610C | PQ4R10XJ470 | 47 | S |
| R610D | PQ4R10XJ470 | 47 | S |
| R611A | ERDS2TJ680 | 68 | |
| R611B | ERDS2TJ680 | 68 | |
| R611C | ERDS2TJ680 | 68 | |
| R611D | ERDS2TJ680 | 68 | |
| R612A | PQ4R10XJ153 | 15K | S |
| R612B | PQ4R10XJ153 | 15K | S |
| R612C | PQ4R10XJ153 | 15K | S |
| R612D | PQ4R10XJ153 | 15K | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R613A | ERJ3GEYJ103 | 10K | |
| R613B | ERJ3GEYJ103 | 10K | |
| R613C | ERJ3GEYJ103 | 10K | |
| R613D | ERJ3GEYJ103 | 10K | |
| R614A | PQ4R10XJ470 | 47 | S |
| R614B | PQ4R10XJ470 | 47 | S |
| R614C | PQ4R10XJ470 | 47 | S |
| R614D | PQ4R10XJ470 | 47 | S |
| R615A | ERDS2TJ680 | 68 | |
| R615B | ERDS2TJ680 | 68 | |
| R615C | ERDS2TJ680 | 68 | |
| R615D | ERDS2TJ680 | 68 | |
| R616A | ERJ3GEYJ101 | 100 | |
| R616B | ERJ3GEYJ101 | 100 | |
| R616C | ERJ3GEYJ101 | 100 | |
| R616D | ERJ3GEYJ101 | 100 | |
| R617A | ERJ3GEYJ471 | 470 | |
| R617B | ERJ3GEYJ471 | 470 | |
| R617C | ERJ3GEYJ471 | 470 | |
| R617D | ERJ3GEYJ471 | 470 | |
| R618A | ERJ3GEYJ272 | 2.7K | |
| R618B | ERJ3GEYJ272 | 2.7K | |
| R618C | ERJ3GEYJ272 | 2.7K | |
| R618D | ERJ3GEYJ272 | 2.7K | |
| R619A | ERJ3GEYJ391 | 390 | |
| R619B | ERJ3GEYJ391 | 390 | |
| R619C | ERJ3GEYJ391 | 390 | |
| R619D | ERJ3GEYJ391 | 390 | |
| | | | |
| R620A | ERJ3GEYJ272 | 2.7K | |
| R620B | ERJ3GEYJ272 | 2.7K | |
| R620C | ERJ3GEYJ272 | 2.7K | |
| R620D | ERJ3GEYJ272 | 2.7K | |
| R621A | ERJ3GEYJ391 | 390 | |
| R621B | ERJ3GEYJ391 | 390 | |
| R621C | ERJ3GEYJ391 | 390 | |
| R621D | ERJ3GEYJ391 | 390 | |
| R622A | ERJ3GEYJ184 | 180K | |
| R622B | ERJ3GEYJ184 | 180K | |
| R622C | ERJ3GEYJ184 | 180K | |
| R622D | ERJ3GEYJ184 | 180K | |
| R623A | ERJ3GEYJ104 | 100K | |
| R623B | ERJ3GEYJ104 | 100K | |
| R623C | ERJ3GEYJ104 | 100K | |
| R623D | ERJ3GEYJ104 | 100K | |
| R624A | ERJ3GEYJ104 | 100K | |
| R624B | ERJ3GEYJ104 | 100K | |
| R624C | ERJ3GEYJ104 | 100K | |
| R624D | ERJ3GEYJ104 | 100K | |
| R625A | ERJ3GEYJ101 | 100 | |
| R625B | ERJ3GEYJ101 | 100 | |
| R625C | ERJ3GEYJ101 | 100 | |
| R625D | ERJ3GEYJ101 | 100 | |
| R626A | ERJ3GEYJ471 | 470 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| R626B | ERJ3GEYJ471 | 470 | |
| R626C | ERJ3GEYJ471 | 470 | |
| R626D | ERJ3GEYJ471 | 470 | |
| R627A | ERJ3GEYJ104 | 100K | |
| R627B | ERJ3GEYJ104 | 100K | |
| R627C | ERJ3GEYJ104 | 100K | |
| R627D | ERJ3GEYJ104 | 100K | |
| R628A | ERJ3EKF7872 | 78.7K | |
| R628B | ERJ3EKF7872 | 78.7K | |
| R628C | ERJ3EKF7872 | 78.7K | |
| R628D | ERJ3EKF7872 | 78.7K | |
| R629A | ERJ3EKF7872 | 78.7K | |
| R629B | ERJ3EKF7872 | 78.7K | |
| R629C | ERJ3EKF7872 | 78.7K | |
| R629D | ERJ3EKF7872 | 78.7K | |
| | | | |
| R630A | ERJ3GEYJ623 | 62K | |
| R630B | ERJ3GEYJ623 | 62K | |
| R630C | ERJ3GEYJ623 | 62K | |
| R630D | ERJ3GEYJ623 | 62K | |
| R631A | ERJ3GEYJ104 | 100K | |
| R631B | ERJ3GEYJ104 | 100K | |
| R631C | ERJ3GEYJ104 | 100K | |
| R631D | ERJ3GEYJ104 | 100K | |
| R632A | ERJ1WYJ102V | 1K | |
| R632B | ERJ1WYJ102V | 1K | |
| R632C | ERJ1WYJ102V | 1K | |
| R632D | ERJ1WYJ102V | 1K | |
| R633A | PQ4R10XJ473 | 47K | S |
| R633B | PQ4R10XJ473 | 47K | S |
| R633C | PQ4R10XJ473 | 47K | S |
| R633D | PQ4R10XJ473 | 47K | S |
| R634A | ERJ3GEYJ682 | 6.8K | |
| R634B | ERJ3GEYJ682 | 6.8K | |
| R634C | ERJ3GEYJ682 | 6.8K | |
| R634D | ERJ3GEYJ682 | 6.8K | |
| R635A | ERJ3GEYJ273 | 27K | |
| R635B | ERJ3GEYJ273 | 27K | |
| R635C | ERJ3GEYJ273 | 27K | |
| R635D | ERJ3GEYJ273 | 27K | |
| R636A | ERJ3GEYJ473 | 47K | |
| R636B | ERJ3GEYJ473 | 47K | |
| R636C | ERJ3GEYJ473 | 47K | |
| R636D | ERJ3GEYJ473 | 47K | |
| R636E | ERJ3GEYJ473 | 47K | |
| R636F | ERJ3GEYJ473 | 47K | |
| R636G | ERJ3GEYJ473 | 47K | |
| R636H | ERJ3GEYJ391 | 47K | |
| R637A | ERJ3GEYJ684 | 680K | |
| R637B | ERJ3GEYJ684 | 680K | |
| R637C | ERJ3GEYJ684 | 680K | |
| R637D | ERJ3GEYJ684 | 680K | |
| R638A | ERJ3GEYJ391 | 390 | |
| R638B | ERJ3GEYJ391 | 390 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R638C | ERJ3GEYJ391 | 390 | |
| R638D | ERJ3GEYJ391 | 390 | |
| R639 | PQ4R10XJ473 | 47K | S |
| | | | |
| R640 | PQ4R10XJ152 | 1.5K | S |
| R641 | ERJ3GEYJ394 | 390K | |
| R642 | ERJ3GEYJ394 | 390K | |
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C101 | ECUV1C104KBV | 0.1 | S |
| C102 | ECUV1C104KBV | 0.1 | S |
| C103 | ECUV1C104KBV | 0.1 | S |
| C104 | ECUV1C104KBV | 0.1 | S |
| C105 | ECUV1C104KBV | 0.1 | S |
| C106 | ECUV1H470JCV | 47P | |
| C107 | ECUV1H470JCV | 47P | |
| C108 | ECUV1H470JCV | 47P | |
| C109 | ECUV1H470JCV | 47P | |
| | | | |
| C110 | ECUV1C104KBV | 0.1 | |
| C111 | ECUV1C104KBV | 0.1 | |
| C112 | ECUV1C104KBV | 0.1 | |
| C113 | ECUV1C104KBV | 0.1 | |
| C114 | ECUV1H470JCV | 47P | |
| C115 | ECUV1H470JCV | 47P | |
| C116 | ECUV1H470JCV | 47P | |
| C119 | ECUV1H470JCV | 47P | |
| | | | |
| C120 | ECUV1H470JCV | 47P | |
| C121 | ECUV1H100DCV | 10P | |
| C122 | ECUV1H100DCV | 10P | |
| C123 | ECUV1C104KBV | 0.1 | S |
| C124 | ECEA1HKS4R7 | 4.7 | S |
| C125 | ECUV1H470JCV | 47P | |
| C126 | ECUV1H470JCV | 47P | |
| C127 | ECUV1H470JCV | 47P | |
| C128 | ECUV1H470JCV | 47P | |
| C129 | ECUV1H470JCV | 47P | |
| | | | |
| C130 | ECUV1C104KBV | 0.1 | S |
| C131 | ECUV1C104KBV | 0.1 | S |
| C132 | ECUV1C104KBV | 0.1 | S |
| C133 | ECUV1C104KBV | 0.1 | S |
| C134 | ECUV1C104KBV | 0.1 | S |
| C135 | ECUV1C104KBV | 0.1 | S |
| C136 | ECUV1C104KBV | 0.1 | S |
| C137 | ECUV1C104KBV | 0.1 | S |
| C138 | ECUV1C104KBV | 0.1 | S |
| C139 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C140 | ECUV1C104KBV | 0.1 | S |
| C141 | ECUV1C104KBV | 0.1 | S |
| C142 | ECUV1H100DCV | 10P | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C143 | ECUV1H100DCV | 10P | |
| C144 | ECUV1H100DCV | 10P | |
| C145 | ECUV1H100DCV | 10P | |
| C146 | ECUV1H100DCV | 10P | |
| C147 | ECUV1H100DCV | 10P | |
| C149 | ECUV1H470JCV | 47P | |
| | | | |
| C150 | ECUV1H470JCV | 47P | |
| C151 | ECUV1H470JCV | 47P | |
| C152 | ECUV1H470JCV | 47P | |
| C153 | ECUV1H100DCV | 10P | |
| C154 | ECUV1H470JCV | 47P | |
| C155 | ECUV1H100DCV | 10P | |
| C156 | ECUV1H470JCV | 47P | |
| C157 | ECUV1H470JCV | 47P | |
| C158 | ECUV1H120JCV | 12P | |
| C159 | ECUV1H120JCV | 12P | |
| | | | |
| C160 | ECUV1H180JCV | 18P | |
| C161 | ECUV1H180JCV | 18P | |
| C162 | ECUV1H050CCV | 5P | |
| C163 | ECUV1H050CCV | 5P | |
| C164 | ECUV1C104KBV | 0.1 | S |
| C165 | ECUV1C104KBV | 0.1 | S |
| C166 | ECUV1C104KBV | 0.1 | S |
| C167 | ECUV1C104KBV | 0.1 | S |
| C168 | ECUV1C104KBV | 0.1 | S |
| C169 | ECUV1H181JCV | 180P | |
| | | | |
| C170 | ECUV1C104KBV | 0.1 | S |
| C171 | ECUV1C104KBV | 0.1 | S |
| C172 | ECUV1H152KBV | 0.0015 | |
| C173 | ECEA1HN4R7S | 4.7 | S |
| C174 | ECEA1HN4R7S | 4.7 | S |
| C175 | ECUV1C104KBV | 0.1 | |
| | | | |
| C181 | ECUV1H100DCV | 10P | |
| C182 | ECUV1C104KBV | 0.1 | |
| C183 | ECUV1C104KBV | 0.1 | |
| C185 | ECUV1H223ZFV | 0.022 | |
| C186 | ECUV1H223ZFV | 0.022 | |
| C187 | ECUV1C104KBV | 0.1 | S |
| C188 | ECUV1C104KBV | 0.1 | S |
| C189 | ECEA1EU101 | 100 | |
| | | | |
| C190 | ECUV1C104KBV | 0.1 | S |
| C191 | ECUV1H223ZFV | 0.022 | |
| C192 | ECUV1H223ZFV | 0.022 | |
| C193 | ECUV1H223ZFV | 0.022 | |
| C194 | ECUV1H223ZFV | 0.022 | |
| C195 | ECUV1H122KBV | 0.0012 | |
| C196 | ECUV1H331JCV | 330P | |
| C197 | ECEA1HU330 | 33 | |
| C198 | ECEA1HKS010 | 1 | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C199 | ECUV1C563KBV | 0.056 | |
| | | | |
| C200 | ECEA1EU470 | 47 | S |
| C201 | ECEA1HKS4R7 | 4.7 | S |
| C202 | PSCUV2EY104K | 0.1 | |
| C203 | PSCUV2EY104K | 0.1 | |
| C204 | PSCUV2EY104K | 0.1 | |
| C205 | PSCUV2EY104K | 0.1 | |
| C206 | ECUV1C823KBV | 0.082 | |
| C207 | ECUV1C823KBV | 0.082 | |
| C208 | ECEA1HN3R3S | 3.3 | S |
| C209 | ECUV1H100DCV | 10P | |
| | | | |
| C210 | ECEA1HU330 | 33 | |
| C211 | ECEA1HU330 | 33 | |
| C212 | EEUFC1H221SB | 220 | |
| C213 | ECQV1H104JZ | 0.1 | S |
| C214 | PQCUV1H471JC | 470P | |
| C215 | PQCUV1E224MD | 0.22 | |
| C216 | ECEA1VKS100 | 10 | S |
| C217 | PQCUV1H473MD | 0.047 | S |
| C218 | EEUFC1H221SB | 220 | |
| C219 | PQCUV1H104ZF | 0.1 | S |
| | | | |
| C220 | PQCUV1H104ZF | 0.1 | S |
| C221 | EEUFC1H101B | 100 | |
| C226 | ECUV1H223KBV | 0.022 | S |
| C227 | ECUV1H470JCV | 47P | |
| C228 | ECUV1C104KBV | 0.1 | S |
| C229 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C230 | ECUV1H470JCV | 47P | |
| C231 | ECUV1H470JCV | 47P | |
| | | | |
| C240 | ECUV1C104KBV | 0.1 | S |
| C241 | ECUV1C104KBV | 0.1 | S |
| C242 | ECUV1C104KBV | 0.1 | S |
| C243 | ECUV1H470JCV | 47P | |
| C244 | ECUV1H470JCV | 47P | |
| C245 | ECUV1H470JCV | 47P | |
| C246 | ECUV1H470JCV | 47P | |
| C247 | ECUV1H470JCV | 47P | |
| C248 | ECUV1H470JCV | 47P | |
| C249 | ECUV1H470JCV | 47P | |
| | | | |
| C250 | ECUV1H470JCV | 47P | |
| C251 | ECUV1H470JCV | 47P | |
| C252 | ECUV1H470JCV | 47P | |
| C253 | ECUV1H470JCV | 47P | |
| C254 | ECUV1H470JCV | 47P | |
| C255 | ECUV1C104KBV | 0.1 | S |
| C256 | ECUV1C104KBV | 0.1 | S |
| C257 | ECUV1C104KBV | 0.1 | S |
| C258 | ECUV1C104KBV | 0.1 | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C259 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C260 | ECUV1C104KBV | 0.1 | S |
| C261 | ECUV1C104KBV | 0.1 | S |
| C262 | ECUV1C104KBV | 0.1 | S |
| C263 | ECUV1C104KBV | 0.1 | S |
| C264 | ECUV1C104KBV | 0.1 | S |
| C265 | ECUV1C104KBV | 0.1 | S |
| C266 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C270 | ECEA1AU101 | 100 | |
| C271 | ECEA1AU221 | 220 | |
| C272 | ECEA1AU331 | 330 | |
| | | | |
| C500 | ECUV1H330JCV | 33P | |
| C501 | ECUV1H330JCV | 33P | |
| C502 | ECUV1H270JCV | 27P | |
| C503 | ECUV1H270JCV | 27P | |
| C505 | ECUV1H330JCV | 33P | |
| C506 | ECUV1H330JCV | 33P | |
| C508 | ECUV1C104KBV | 0.1 | S |
| C509 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C510 | ECUV1C104KBV | 0.1 | S |
| C511 | ECUV1C104KBV | 0.1 | S |
| C512 | ECUV1C104KBV | 0.1 | S |
| C513 | ECUV1C104KBV | 0.1 | S |
| C514 | ECUV1H102KBV | 0.001 | S |
| C515 | ECUV1H102KBV | 0.001 | S |
| C519 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C600A | PQCUV1H105JC | 1 | |
| C600B | PQCUV1H105JC | 1 | |
| C600C | PQCUV1H105JC | 1 | |
| C600D | PQCUV1H105JC | 1 | |
| C600E | PQCUV1H105JC | 1 | |
| C600F | PQCUV1H105JC | 1 | |
| C600G | PQCUV1H105JC | 1 | |
| C600H | PQCUV1H105JC | 1 | |
| C601A | ECUV1C104KBV | 0.1 | S |
| C601B | ECUV1C104KBV | 0.1 | S |
| C601C | ECUV1C104KBV | 0.1 | S |
| C601D | ECUV1C104KBV | 0.1 | S |
| C601E | ECUV1C104KBV | 0.1 | S |
| C601F | ECUV1C104KBV | 0.1 | S |
| C601G | ECUV1C104KBV | 0.1 | S |
| C601H | ECUV1C104KBV | 0.1 | S |
| C602A | PQCUV1H105JC | 1 | |
| C602B | PQCUV1H105JC | 1 | |
| C602C | PQCUV1H105JC | 1 | |
| C602D | PQCUV1H105JC | 1 | |
| C602E | PQCUV1H105JC | 1 | |
| C602F | PQCUV1H105JC | 1 | |
| C602G | PQCUV1H105JC | 1 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C602H | PQCUV1H105JC | 1 | |
| C603A | PQCUV1H105JC | 1 | |
| C603B | PQCUV1H105JC | 1 | |
| C603C | PQCUV1H105JC | 1 | |
| C603D | PQCUV1H105JC | 1 | |
| C603E | PQCUV1H105JC | 1 | |
| C603F | PQCUV1H105JC | 1 | |
| C603G | PQCUV1H105JC | 1 | |
| C603H | PQCUV1H105JC | 1 | |
| C604A | ECUV1H680JCV | 68P | |
| C604B | ECUV1H680JCV | 68P | |
| C604C | ECUV1H680JCV | 68P | |
| C604D | ECUV1H680JCV | 68P | |
| C604E | ECUV1H680JCV | 68P | |
| C604F | ECUV1H680JCV | 68P | |
| C604G | ECUV1H680JCV | 68P | |
| C604H | ECUV1H680JCV | 68P | |
| C605A | ECUV1H680JCV | 68P | |
| C605B | ECUV1H680JCV | 68P | |
| C605C | ECUV1H680JCV | 68P | |
| C605D | ECUV1H680JCV | 68P | |
| C605E | ECUV1H680JCV | 68P | |
| C605F | ECUV1H680JCV | 68P | |
| C605G | ECUV1H680JCV | 68P | |
| C605H | ECUV1H680JCV | 68P | |
| C607A | ECUV1H223ZFV | 0.022 | |
| C607B | ECUV1H223ZFV | 0.022 | |
| C607C | ECUV1H223ZFV | 0.022 | |
| C607D | ECUV1H223ZFV | 0.022 | |
| C608A | ECUV1H223ZFV | 0.022 | |
| C608B | ECUV1H223ZFV | 0.022 | |
| C608C | ECUV1H223ZFV | 0.022 | |
| C608D | ECUV1H223ZFV | 0.022 | |
| C609A | ECEA1EN100S | 10 | |
| C609B | ECEA1EN100S | 10 | |
| C609C | ECEA1EN100S | 10 | |
| C609D | ECEA1EN100S | 10 | |
| | | | |
| C610A | ECEA1EN100S | 10 | |
| C610B | ECEA1EN100S | 10 | |
| C610C | ECEA1EN100S | 10 | |
| C610D | ECEA1EN100S | 10 | |
| C611A | PQCUV1C184KB | 0.18 | |
| C611B | PQCUV1C184KB | 0.18 | |
| C611C | PQCUV1C184KB | 0.18 | |
| C611D | PQCUV1C184KB | 0.18 | |
| C612A | ECUV1H183KBV | 0.018 | |
| C612B | ECUV1H183KBV | 0.018 | |
| C612C | ECUV1H183KBV | 0.018 | |
| C612D | ECUV1H183KBV | 0.018 | |
| C613A | ECUV1H183KBV | 0.018 | |
| C613B | ECUV1H183KBV | 0.018 | |
| C613C | ECUV1H183KBV | 0.018 | |
| C613D | ECUV1H183KBV | 0.018 | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C614A | PQCUV1C474KB | 0.47 | |
| C614B | PQCUV1C474KB | 0.47 | |
| C614C | PQCUV1C474KB | 0.47 | |
| C614D | PQCUV1C474KB | 0.47 | |
| C615A | PQCUV1C184KB | 0.18 | |
| C615B | PQCUV1C184KB | 0.18 | |
| C615C | PQCUV1C184KB | 0.18 | |
| C615D | PQCUV1C184KB | 0.18 | |
| C617A | ECUV1H221JCV | 220P | |
| C617B | ECUV1H221JCV | 220P | |
| C617C | ECUV1H221JCV | 220P | |
| C617D | ECUV1H221JCV | 220P | |
| C618A | ECUV1H221JCV | 220P | |
| C618B | ECUV1H221JCV | 220P | |
| C618C | ECUV1H221JCV | 220P | |
| C618D | ECUV1H221JCV | 220P | |
| | | | |
| C620A | ECUV1E393KBV | 0.039 | |
| C620B | ECUV1E393KBV | 0.039 | |
| C620C | ECUV1E393KBV | 0.039 | |
| C620D | ECUV1E393KBV | 0.039 | |
| C621A | ECUV1C104KBV | 0.1 | S |
| C621B | ECUV1C104KBV | 0.1 | S |
| C621C | ECUV1C104KBV | 0.1 | S |
| C621D | ECUV1C104KBV | 0.1 | S |
| C622A | ECUV1C104KBV | 0.1 | S |
| C622B | ECUV1C104KBV | 0.1 | S |
| C622C | ECUV1C104KBV | 0.1 | S |
| C622D | ECUV1C104KBV | 0.1 | S |
| C623 | ECUV1C104KBV | 0.1 | S |
| C624 | ECUV1C104KBV | 0.1 | S |
| C625 | ECUV1C104KBV | 0.1 | |
| C626 | ECUV1C104KBV | 0.1 | |
| C627 | ECUV1C104KBV | 0.1 | |
| C628 | ECUV1C104KBV | 0.1 | S |
| C629 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C630 | ECEA1AU331 | 330 | |
| C632A | ECUV1C104KBV | 0.1 | |
| C632B | ECUV1C104KBV | 0.1 | |
| C632C | ECUV1C104KBV | 0.1 | |
| C632D | ECUV1C104KBV | 0.1 | |

9.4. POWER SUPPLY BOARD PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------------|---------|
| | | POWER SUPPLY BORD PARTS | |
| | | | |
| | | | |
| PCB2 | PSLP1074Y | POWER SUPPLY BOARD ASSY (RTL) | |
| | | | |
| | | (ICS) | |
| IC1 | AN8021L | IC | |
| | | | |
| IC101 | PSVIPQ1CF2 | IC | S |
| | | | |
| IC301 | PQVILA6500 | IC | |
| IC304 | PQVILA6500 | IC | |
| | | | |
| | | (TRANSISTORS) | |
| Q1 | PSVTF57KM18A | TRANSISTOR(SI) | S |
| | | | |
| Q31 | 2SC1740S | TRANSISTOR(SI) | |
| | | | |
| Q101 | 2SC1740S | TRANSISTOR(SI) | |
| | | | |
| Q150 | 2SC1740S | TRANSISTOR(SI) | |
| | | | |
| Q201 | 2SC1740S | TRANSISTOR(SI) | |
| Q202 | 2SA933 | TRANSISTOR(SI) | |
| Q203 | 2SD2061 | TRANSISTOR(SI) | |
| Q204 | 2SA933 | TRANSISTOR(SI) | |
| | | | |
| | | | |
| | | (DIODES) | |
| D1 | PQVDD3SBA60M | DIODE(SI) | |
| D3 | PSVDERA2206 | DIODE(SI) | S |
| D4 | PSVDHZS202 | DIODE(SI) | S |
| D5 | PSVDERA2206 | DIODE(SI) | S |
| D6 | PSVDHZS272 | DIODE(SI) | S |
| | | | |
| D15 | PSVDERA1506 | DIODE(SI) | S |
| | | | |
| D31 | PSVDERA1506 | DIODE(SI) | S |
| D32 | PSVDHZS272 | DIODE(SI) | S |
| D33 | PSVDHZS272 | DIODE(SI) | S |
| D34 | PSVDHZS152 | DIODE(SI) | S |
| | | | |
| D101 | PSVDYG902C2R | DIODE(SI) | S |
| D102 | PSVDERB83006 | DIODE(SI) | |
| | | | |
| D111 | PSVDHZS7A2 | DIODE(SI) | S |
| | | | |
| D201 | PSVDERA1506 | DIODE(SI) | S |
| D202 | PSVDYG811S6R | DIODE(SI) | S |
| D204 | PSVDHZS222 | DIODE(SI) | S |
| D205 | PSVDHZS202 | DIODE(SI) | S |
| D206 | PSVDERA1506 | DIODE(SI) | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|------------------------------|---------|
| D207 | 1SS133 | DIODE(SI) | |
| D208 | 1SS133 | DIODE(SI) | |
| D209 | 1SS133 | DIODE(SI) | |
| | | | |
| D210 | PSVDHZS202 | DIODE(SI) | S |
| | | | |
| D301 | PSVDHZS12A2 | DIODE(SI) | S |
| | | | |
| | | (COILS) | |
| BEA1 | PSLEBL02RN1 | COIL | S |
| BEA2 | PSLEBL02RN2 | COIL | S |
| | | | |
| BEA101 | PSLEBL02RN2 | COIL | S |
| BEA103 | PSLEBL01RN1 | COIL | S |
| | | | |
| L1 | ELF19N016A | COIL | |
| | | | |
| L101 | PSLESK08MS5Y | COIL | S |
| | | | |
| | | (CONNECTOR AND SOCKET) | |
| CN1 | PSJPNC18710N | AC IN SOCKET | S |
| | | | |
| CN101 | PQJP7D68Z | CONNECTOR | |
| CN102 | PQJP4D16Z | CONNECTOR | |
| CN103 | PQJP2D12Z | CONNECTOR | |
| CN104 | PQJP2D68Z | CONNECTOR | |
| | | | |
| | | | |
| | | (FUSES) | |
| F1 | XBA2C40TB0L | FUSE | |
| | | | |
| F201 | PSBAAC125V4A | FUSE | |
| | | | |
| | | | |
| | | (PHOTO ELECTRIC TRANSDUCERS) | |
| PC1 | PSVIPC123FY8 | PHOTO ELECTRIC TRANSDUCER | S |
| PC2 | PSVIPC123FY8 | PHOTO ELECTRIC TRANSDUCER | S |
| | | | |
| | | | |
| | | (RELAY) | |
| RL201 | PSSLAJZ32127 | RELAY | S |
| | | | |
| | | | |
| | | (THERMISTORS) | |
| NTC1 | PSRTNT11D5R0 | THERMISTOR | S |
| NTC2 | PSRTNT11D5R0 | THERMISTOR | S |
| | | | |
| | | | |
| | | (TRANSFORMER) | |
| T1 | PSLT2U048 | TRANSFORMER | S |
| | | | |
| | | | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | (VARIABLE RESISTORS) | |
| VR101 | EVNDXAA03B53 | VARIABLE RESISTOR | |
| VR102 | EVNDXAA03B13 | VARIABLE RESISTOR | |
| | | | |
| | | | |
| | | (VARISTOR) | |
| Z1 | PSVDENC471D7 | VARISTOR | S |
| | | | |
| | | | |
| | | (RESISTORS) | |
| R1 | ERDS1TJ564 | 560K | |
| R5 | ERDS2TJ220 | 22 | |
| R7 | ERDS2TJ273 | 27K | |
| R8 | ERDS2TJ161 | 160 | |
| R9 | ERDS2TJ820 | 82 | |
| | | | |
| R10 | ERDS2TJ821 | 820 | |
| R11 | PSBPR38F022 | 0.22 | |
| R13 | ERDS2TJ103 | 10K | |
| R14 | ERDS2TJ473 | 47K | |
| R15 | ERDS2TJ104 | 100K | |
| R17 | ERG1SJ470 | 47 | |
| | | | |
| R21 | ERG2SJ103 | 10K | |
| R22 | ERG2SJ103 | 10K | |
| R23 | ERG2SJ103 | 10K | |
| | | | |
| R31 | ERDS2TJ824 | 820K | |
| R32 | ERDS2TJ824 | 820K | |
| R33 | ERDS2TJ124 | 120K | |
| R34 | ERDS2TJ124 | 120K | |
| R35 | ERDS2TJ103 | 10K | |
| R36 | ERDS2TJ103 | 10K | |
| R38 | ERDS2TJ102 | 1K | |
| | | | |
| R110 | ERDS2TJ182 | 1.8K | |
| R111 | ERDS2TJ102 | 1K | |
| R112 | ERDS2TJ562 | 5.6K | |
| R113 | ERDS2TJ682 | 6.8K | |
| R114 | ERDS2TJ163 | 16K | |
| R116 | ERDS2TJ562 | 5.6K | |
| | | | |
| R120 | ERDS2TJ752 | 7.5K | |
| R121 | ERDS2TJ222 | 2.2K | |
| | | | |
| R150 | ERDS2TJ123 | 12K | |
| R151 | ERDS2TJ474 | 470K | |
| R152 | ERDS2TJ223 | 22K | |
| R153 | ERDS2TJ223 | 22K | |
| | | | |
| R201 | ERDS2TJ101 | 100 | |
| R202 | ERDS2TJ102 | 1K | |
| R203 | ERDS2TJ222 | 2.2K | |
| R204 | ERDS2TJ103 | 10K | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R205 | ERDS2TJ472 | 4.7K | |
| R206 | ERDS2TJ472 | 4.7K | |
| R207 | ERG2SJ152 | 1.5K | |
| | | | |
| R210 | ERX2SJ6R8 | 6.8 | |
| R212 | ERX2SJ6R8 | 6.8 | |
| R214 | ERDS2TJ102 | 1K | |
| R215 | ERDS2TJ102 | 1K | |
| | | | |
| R301 | ERG2SJ101 | 100 | |
| R302 | ERDS2TJ222 | 2.2K | |
| R303 | ERDS2TJ272 | 2.7K | |
| R304 | ERDS2TJ392 | 3.9K | |
| R305 | ERDS2TJ103 | 10K | |
| R306 | ERDS2TJ2R2 | 2.2 | |
| R307 | ERDS2TJ2R2 | 2.2 | |
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C1 | PSCQERE224 | 0.22 | S |
| C5 | PSCEA400V271 | 270P | S |
| C7 | PSCKD161E472 | 0.0047 | S |
| C8 | PSCKD085L101 | 100P | S |
| | | | |
| C10 | PSCKD901F104 | 0.1 | S |
| C11 | PSQE50F2D103 | 0.01 | S |
| C12 | PSCEA35VB820 | 82P | S |
| C13 | ECQB1H104JF | 0.1 | |
| C14 | PSCKD901F104 | 0.1 | S |
| C15 | ECQB1H471KF | 470P | |
| C16 | ECQB1H472JF | 0.0047 | |
| C17 | PSCKD161E472 | 0.0047 | S |
| | | | |
| C31 | ECQE6104KF | 0.1 | |
| | | | |
| C101 | PSCEA35VB331 | 330P | S |
| C102 | PSCEA35VB331 | 330P | S |
| C103 | PSCEA16VB470 | 47P | S |
| C109 | PSCKD105R152 | 0.0015 | S |
| | | | |
| C110 | PSCKD901F104 | 0.1 | S |
| | | | |
| C201 | ECQB1H332JF | 0.0033 | |
| | | | |
| C301 | PSCEA35VB820 | 82P | S |
| C302 | PSCKD901F104 | 0.1 | S |
| C303 | PSCKD901F104 | 0.1 | S |
| | | | |
| R16 | ECQB1H473JF | 0.047 | |

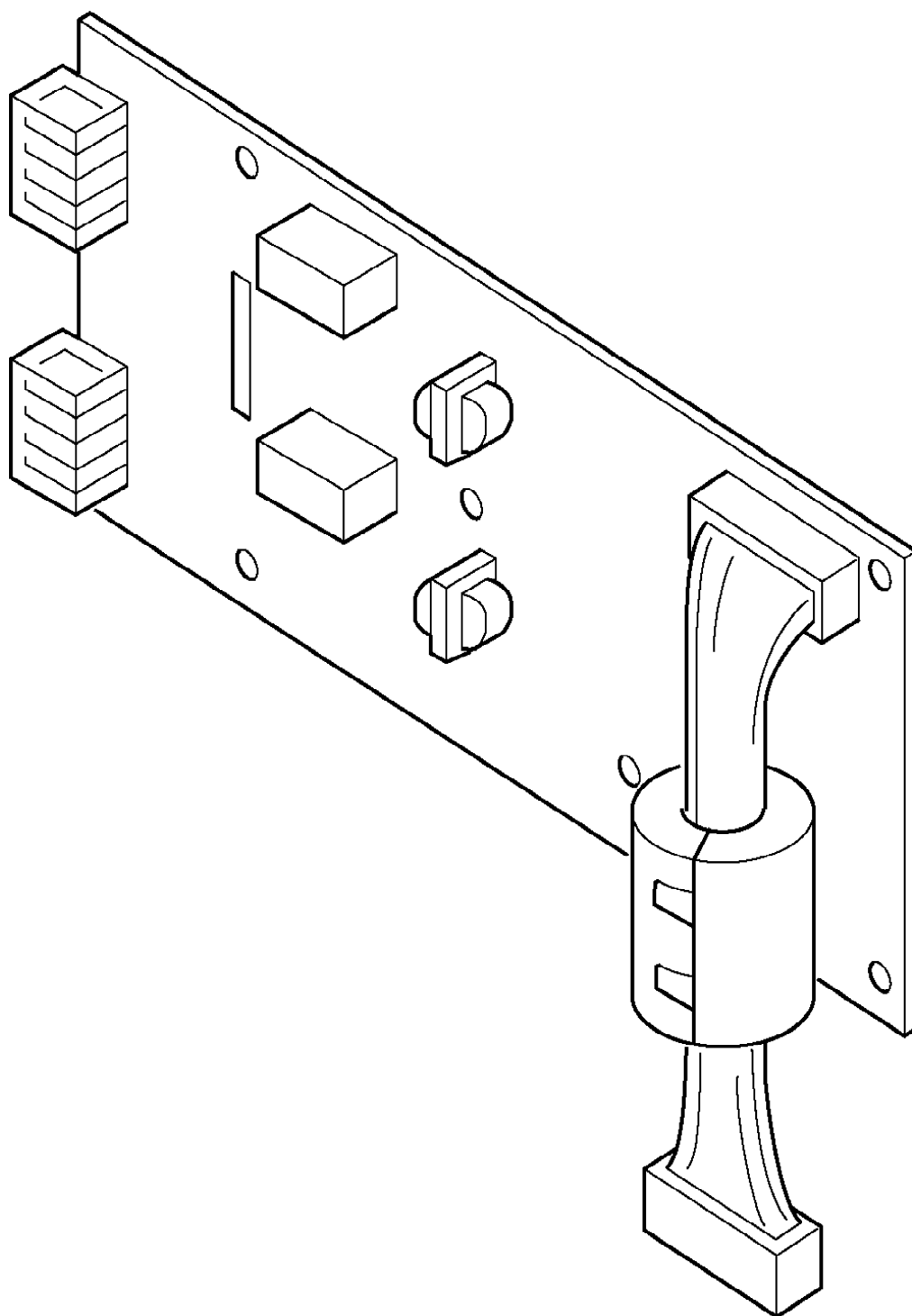
9.5. FIXTURES AND TOOLS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|------------|-----------|-------------------------|---------|
| | | FIXTURES AND TOOLS | |
| | | | |
| | | | |
| EC1 | PQZZ2K7Z | EXTENSION CORD, 2P | |
| EC2 | PQZZ2K13Z | EXTENSION CORD, 2P | |
| EC3 | PQZZ7K4Z | EXTENSION CORD, 7P | |

Note:

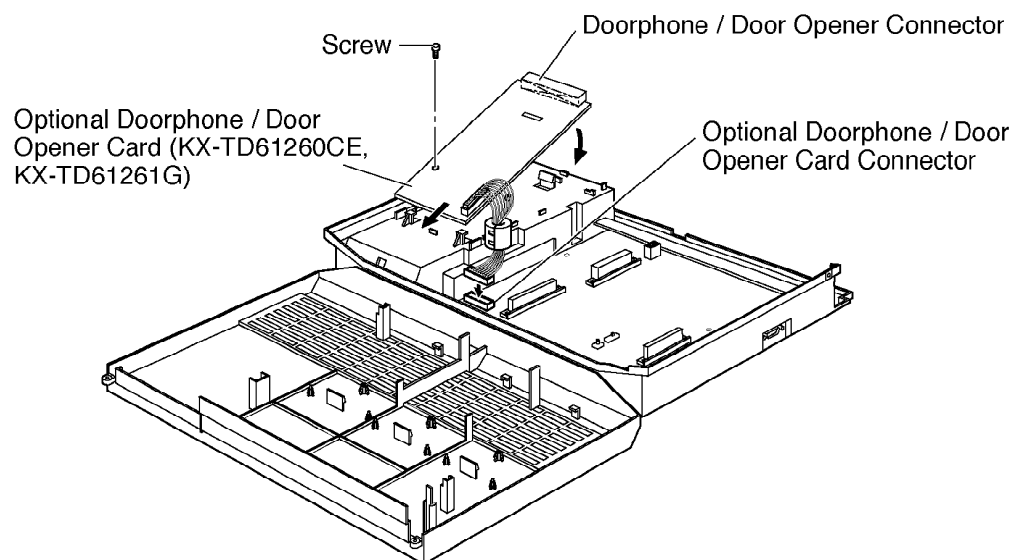
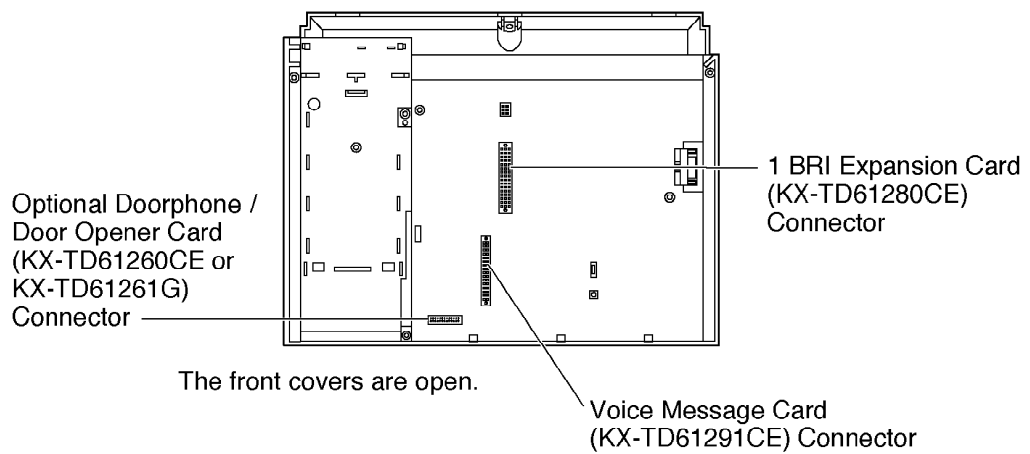
The Extension Cords are useful for servicing. / (They make servicing easy.)

10. KX-TD61260CE / (DOORPHONE / DOOROPENER CARD for T30865)

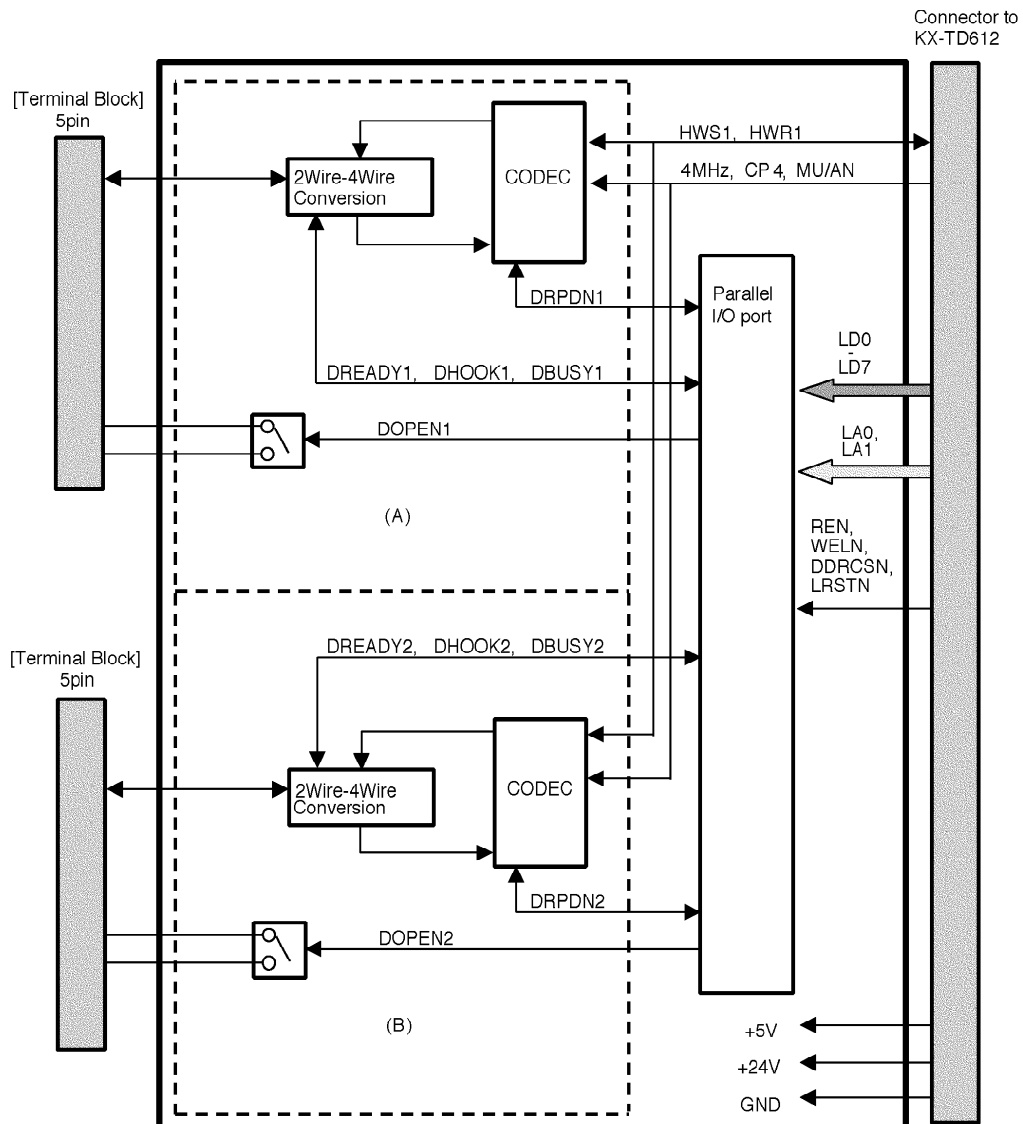


10.1. LOCATION OF OPTIONAL CARDS

The location of optional cards is shown below. / / Precaution: To protect the printed circuit boards (PCB) from static electricity. / Do not touch parts on the PCB in the main unit and on the optional cards. / If accessing the parts is required, wear a grounding strap.



10.2. BLOCK DIAGRAM



10.3. EXPLANATION OF BLOCK DIAGRAM / CIRCUIT OPERATION

10.3.1. OPTION CARD (KX-TD61260CE)

Composition: / This Doorphone card is composed of the control interface with KX-TD612 and two doorphone interface and two dooropener interface section. /

1. Doorphone Section

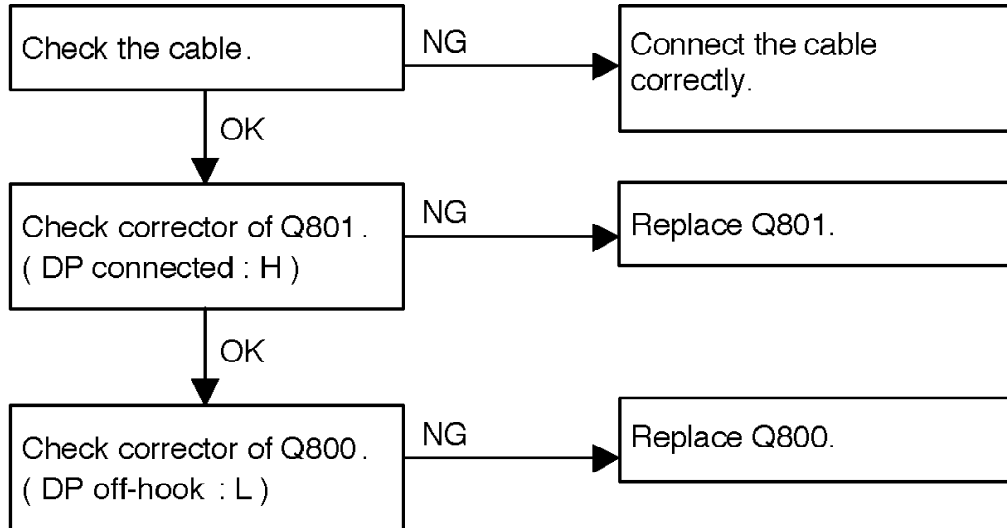
This card has two door phone interfaces. / This door phone intercom pass is composed of the send amplifier and receive amplifier circuits. / These interfaces have the door phone connect detection circuit and the door phone hook detection circuit. /

2. Dooropener Section

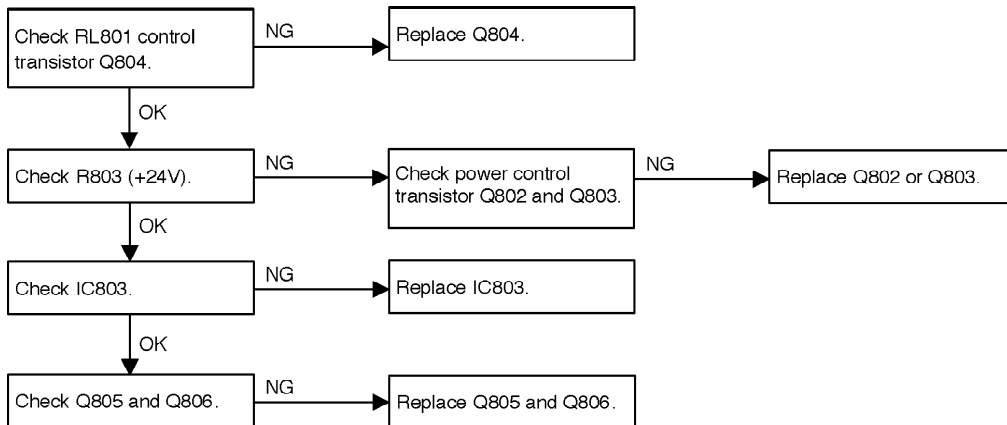
This card has two door opener interfaces. These interfaces are used for the door opener SW.

10.4. TROUBLESHOOTING GUIDE

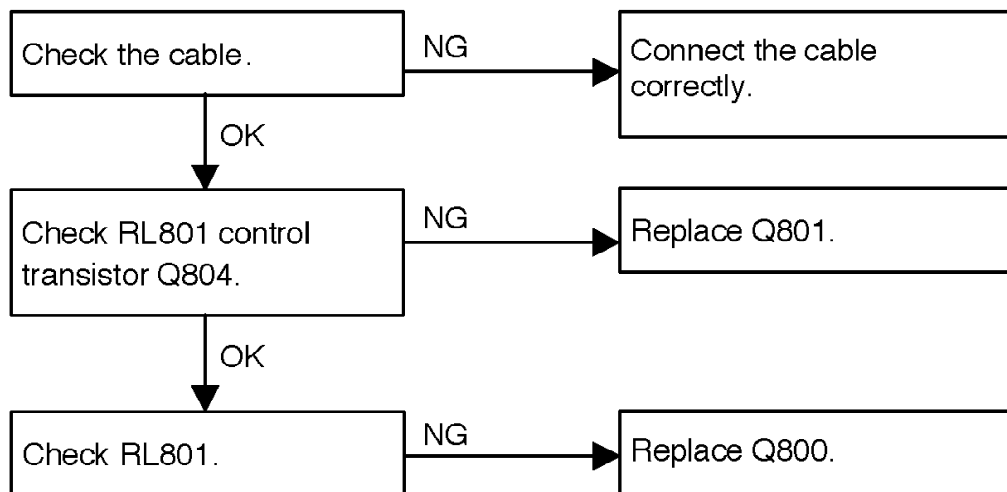
10.4.1. CAN NOT CALL FROM DOORPHONE



10.4.2. CAN NOT TALK



10.4.3. CAN NOT USE DOOROPENER

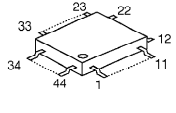
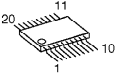
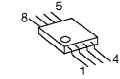
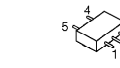
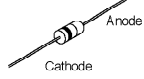
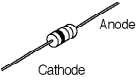
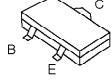



10.5. SCHEMATIC DIAGRAM

10.6. PRINTED CIRCUIT BOARD (COMPONENT VIEW)

10.7. SERVICE INFORMATION

10.7.1. TERMINAL GUIDE OF ICS, TRANSISTORS AND DIODES

| | | | | |
|---|--|---|--|---|
|  <p>PQVIMS8C5A2K</p> |  <p>PSVIMC45503W</p> |  <p>PQVINJM2904V</p> |  <p>PQVITC7SU04F</p> |  <p>MA4120</p> |
|  <p>MA4068</p> |  <p>UN521DTX, PQVTDTC124EU, 2SA1576R, 2SC4081R, PQVTDTC143E, UN5113, UN5213</p> | | |  <p>MA110</p> |

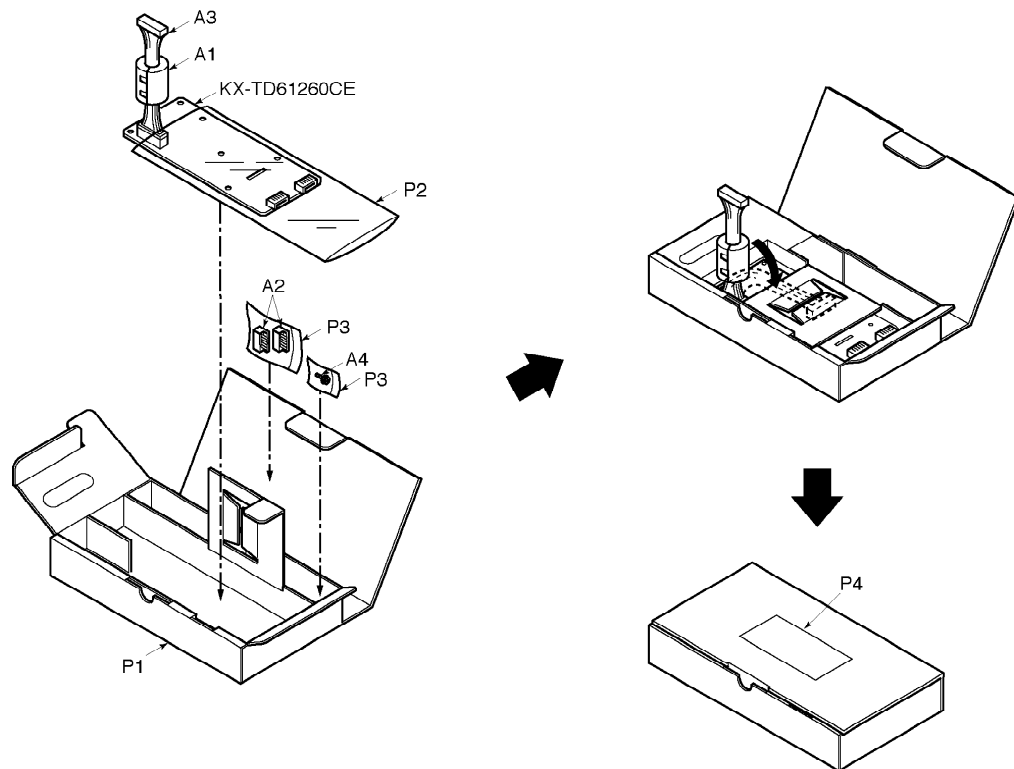
10.7.2. IC DATA

10.7.2.1. PARALLEL I/O (IC800) PORT MAP

| Pin No. | Pin Name | I/O | Function | Operation |
|---------|------------|-----|----------------------------|--|
| 35 | CARD CODE2 | I | Card detection and code. | L:German L:T30865 H:German L:T30865 H:CO / L:German H:T30865 Analog CO |
| 36 | CARD CODE1 | I | Card detection and code. | |
| 37 | DHOOK-2 | I | Door-phone2 hook detection | H: on-hook, L: off-hook |
| 38 | DHOOK-1 | I | Door-phone1 hook detection | H: on-hook, L: off-hook |
| 40 | DREADY-2 | I | Door-phone2 Ready | H: connected, L: not connected |
| 41 | DREADY-1 | I | Door-phone1 Ready | H: connected, L: not connected |
| 42 | - | - | (Reserved) | - |
| 43 | - | - | (Reserved) | - |
| 23 | - | - | (Not used) | - |
| 21 | - | - | (Not used) | - |
| 20 | - | - | (Reserved) | - |
| 19 | - | - | (Reserved) | - |
| 18 | - | - | (Reserved) | - |
| 16 | - | - | (Reserved) | - |
| 15 | - | - | (Reserved) | - |
| 14 | - | - | (Reserved) | - |
| 5 | - | - | (Not used) | - |
| 6 | - | - | (Not used) | - |
| 7 | DOPEN-2 | O | Door Opener2 | H: relay on, L: relay off |
| 8 | DOPEN-1 | O | Door Opener1 | H: relay on, L: relay off |
| 13 | DBUSY-2 | O | Door Phone2 Power Control | H: power on, L: power off |
| 11 | DBUSY-1 | O | Door Phone1 Power Control | H: power on, L: power off |

| Pin No. | Pin Name | I/O | Function | Operation |
|---------|----------|-----|---|----------------------------------|
| 10 | DRPDN-2 | O | CODEC(for Door-phone2) power control | H: power on, L: power control |
| 9 | DRPDN-1 | O | CODEC(for Door-phone1) power control | H: power on, L: power control |

10.7.3. ACCESSORIES AND PACKING MATERIALS



11. REPLACEMENT PARTS LIST

This replacement parts list is for KX-TD61260CE only.

Refer to the simplified manual (cover) for other areas.

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.

After the end of this period, the assembly will no longer be available.

2. Important safety notice / Components identified by ⚠ mark have

special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.

3. The S mark indicates service standard parts and may differ from production parts.
4. **RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors are in MICRO FARADS (μ F) P= μ μ F / *Type & Wattage of Resistor**

| Type | | | | | |
|--|--|--|---|--|--|
| ERC:Solid ERD:Carbon PQ4R:Chip | | ERX:Metal Film ERG:Metal Oxide ERO:Metal Film | | PQRD:Carbon PQRQ:Fuse ERF:Wire Wound | |
| Wattege | | | | | |
| 10,16,18:1/8W | | 14,25,S2:1/4W | | 12,50,S1:1/2W 1:1W 2:2W 5:5W | |
| ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica | | ECCD,ECKD,PQCB,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene | | | |
| Voltage | | | | | |
| ECQ Type | | ECQG ECQV Type | ECSZ Type | Others | |
| 1H : 50V 2A : 100V 2E : 250V 2H : 500V | | 05 : 50V 1 : 100V 2 : 200V | OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V | OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V 1V : 35V 50,1H : 50V 1J : 63V 2A : 100V | |

11.1. ACCESSORIES AND PACKING MATERIALS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|-------------|--|----------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| A1 | PQLB5D1 | CORE | S |
| A2 | PSJS05S06Z | CONNECTOR, 5P | |
| A3 | PSJS30Q94Z | CONNECTOR, 30P | |
| A4 | XYN3+F12FN | SCREW | |
| | | | |
| | | | |
| P1 | PSPK1436Z | GIFT BOX | |
| P2 | PSPP1051Z | PROTECTION COVER | |
| P3 | XZB05X08A03 | PROTECTION COVER | |
| P4 | PSQA2153Z | MODEL NO.LABEL | |

11.2. MAIN BOARD PARTS

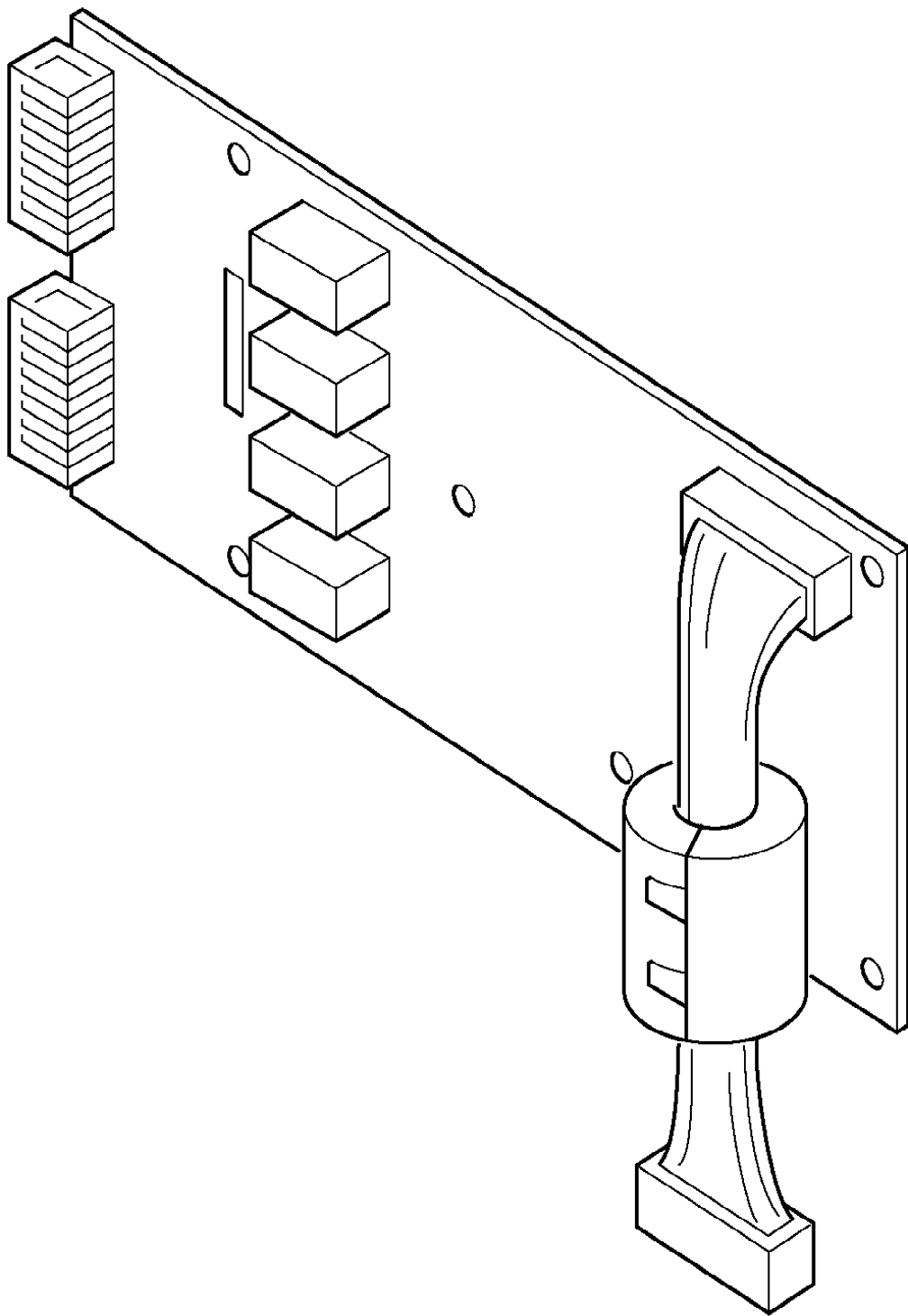
| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | MAIN BOARD PARTS | |
| | | | |
| | | | |
| | | (ICS) | |
| IC800 | PQVIMS8C5A2K | IC | |
| IC801 | PQVITC7SU04F | IC | |
| IC802A | PQVIMC45503W | IC | S |
| IC802B | PQVIMC45503W | IC | S |
| IC803A | PQVINJM2904V | IC | |
| IC803B | PQVINJM2904V | IC | |
| IC805 | PQVITC7SU04F | IC | |
| IC806 | PQVINJM2904V | IC | |
| | | | |
| | | | |
| | | (TRANSISTORS) | |
| Q800A | PQVTDTC124EU | TRANSISTOR(SI) | |
| Q800B | PQVTDTC124EU | TRANSISTOR(SI) | |
| Q801A | UN521DTX | TRANSISTOR(SI) | |
| Q801B | UN521DTX | TRANSISTOR(SI) | |
| Q802A | UN5113 | TRANSISTOR(SI) | S |
| Q802B | UN5113 | TRANSISTOR(SI) | S |
| Q803A | UN5213 | TRANSISTOR(SI) | S |
| Q803B | UN5213 | TRANSISTOR(SI) | S |
| Q804A | PQVTDTC143E | TRANSISTOR(SI) | |
| Q804B | PQVTDTC143E | TRANSISTOR(SI) | |
| Q805A | 2SC4081R | TRANSISTOR(SI) | |
| Q805B | 2SC4081R | TRANSISTOR(SI) | |
| Q806A | 2SA1576R | TRANSISTOR(SI) | |
| Q806B | 2SA1576R | TRANSISTOR(SI) | |
| | | | |
| | | | |
| | | (DIODES) | |
| D800A | MA4068 | DIODE(SI) | |
| D800B | MA4068 | DIODE(SI) | |
| D801A | MA110 | DIODE(SI) | |
| D801B | MA110 | DIODE(SI) | |
| D804 | MA4120 | DIODE(SI) | |
| | | | |
| | | | |
| | | (COILS) | |
| L800A | PQLE106 | COIL | |
| L800B | PQLE106 | COIL | |
| L801A | PQLE106 | COIL | |
| L801B | PQLE106 | COIL | |
| | | | |
| | | | |
| | | (CONNECTORS) | |
| CN800 | PSJP30A62Z | CONNECTOR, 30P | |
| CN801A | PSJP04B11Z | CONNECTOR, 4P | |
| CN801B | PSJP04B11Z | CONNECTOR, 4P | |
| | | | |
| | | | |
| | | (RELAYS) | |
| RL801A | PSSLJV12KTZ | RELAY | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| RL801B | PSSLJV12KTZ | RELAY | |
| | | | |
| | | (TRANSFORMERS) | |
| T800A | PSLT8D7A | TRANSFORMER | |
| T800B | PSLT8D7A | TRANSFORMER | |
| | | | |
| | | | |
| | | (VARISTORS) | |
| ZNR80A | PQVDNV039D03 | VARISTOR | S |
| ZNR80B | PQVDNV039D03 | VARISTOR | S |
| | | | |
| | | | |
| | | (RESISTORS) | |
| R800A | PQ4R10XJ563 | 56K | S |
| R800B | PQ4R10XJ563 | 56K | S |
| R801A | PQ4R10XJ102 | 1K | S |
| R801B | PQ4R10XJ102 | 1K | S |
| R802A | ERJ14YJ151 | 150 | |
| R802B | ERJ14YJ151 | 150 | |
| R803A | PQ4R10XJ182 | 1.8K | S |
| R803B | PQ4R10XJ182 | 1.8K | S |
| R804A | PQ4R10XJ101 | 100 | S |
| R804B | PQ4R10XJ101 | 100 | S |
| R805A | ERJ12YJ471 | 470 | |
| R805B | ERJ12YJ471 | 470 | |
| R806A | PQ4R10XJ473 | 47K | S |
| R806B | PQ4R10XJ473 | 47K | S |
| R807A | PQ4R10XJ101 | 100 | S |
| R807B | PQ4R10XJ101 | 100 | S |
| R808A | PQ4R10XJ473 | 47K | S |
| R808B | PQ4R10XJ473 | 47K | S |
| R809A | PQ4R10XJ473 | 47K | S |
| R809B | PQ4R10XJ473 | 47K | S |
| | | | |
| R810A | PQ4R10XJ563 | 56K | S |
| R810B | PQ4R10XJ563 | 56K | S |
| R811A | PQ4R10XJ564 | 560K | S |
| R811B | PQ4R10XJ564 | 560K | S |
| R812A | PQ4R10XJ104 | 100K | S |
| R812B | PQ4R10XJ104 | 100K | S |
| R813A | PQ4R10XJ274 | 270K | S |
| R813B | PQ4R10XJ274 | 270K | S |
| R814A | PQ4R10XJ274 | 270K | S |
| R814B | PQ4R10XJ274 | 270K | S |
| R815A | PQ4R10XJ823 | 82K | S |
| R815B | PQ4R10XJ823 | 82K | S |
| R816A | PQ4R10XJ823 | 82K | S |
| R816B | PQ4R10XJ823 | 82K | S |
| R817A | PQ4R10XJ124 | 120K | S |
| R817B | PQ4R10XJ124 | 120K | S |
| | | | |
| R820 | PQ4R10XJ330 | 33 | S |
| R821 | PQ4R10XJ330 | 33 | S |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R822 | PQ4R10XJ330 | 33 | S |
| R823 | PQ4R10XJ330 | 33 | S |
| R824 | PQ4R10XJ330 | 33 | S |
| R825 | PQ4R10XJ330 | 33 | S |
| R826 | PQ4R10XJ330 | 33 | S |
| R827 | PQ4R10XJ330 | 33 | S |
| R828 | PQ4R10XJ330 | 33 | S |
| R829 | PQ4R10XJ330 | 33 | S |
| | | | |
| R830 | PQ4R10XJ330 | 33 | S |
| R831 | PQ4R10XJ330 | 33 | S |
| R832 | PQ4R10XJ330 | 33 | S |
| R833 | PQ4R10XJ330 | 33 | S |
| R834 | PQ4R10XJ330 | 33 | S |
| R835 | PQ4R10XJ330 | 33 | S |
| R836 | PQ4R10XJ330 | 33 | S |
| R837 | PQ4R10XJ473 | 47K | S |
| R838 | PQ4R10XJ473 | 47K | S |
| R839 | PQ4R10XJ472 | 4.7K | S |
| | | | |
| R840 | PQ4R10XJ473 | 47K | S |
| R841 | PQ4R10XJ820 | 82 | S |
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C800A | ECEA1HKS4R7 | 4.7 | S |
| C800B | ECEA1HKS4R7 | 4.7 | S |
| C801A | PSCUV2EY104K | 0.1 | |
| C801B | PSCUV2EY104K | 0.1 | |
| C802A | PQCUV1H563KB | 0.056 | |
| C802B | PQCUV1H563KB | 0.056 | |
| C803A | ECEA1EU470 | 47 | S |
| C803B | ECEA1EU470 | 47 | S |
| C804A | PQCUV1H223KB | 0.022 | |
| C804B | PQCUV1H223KB | 0.022 | |
| C805A | ECEA1HKS010 | 1 | S |
| C805B | ECEA1HKS010 | 1 | S |
| C806A | ECEA1HU330 | 33 | |
| C806B | ECEA1HU330 | 33 | |
| C807A | PQCUV1H331JC | 330P | |
| C807B | PQCUV1H331JC | 330P | |
| C808A | PQCUV1H122KB | 0.0012 | |
| C808B | PQCUV1H122KB | 0.0012 | |
| C809A | PQCUV1H223KB | 0.022 | S |
| C809B | PQCUV1H223KB | 0.022 | S |
| | | | |
| C810A | PQCUV1H223KB | 0.022 | S |
| C810B | PQCUV1H223KB | 0.022 | S |
| C811A | PQCUV1H223KB | 0.022 | S |
| C811B | PQCUV1H223KB | 0.022 | S |
| C812A | PQCUV1H223KB | 0.022 | S |
| C812B | PQCUV1H223KB | 0.022 | S |
| | | | |
| C820 | PQCUV1H470JC | 47P | |

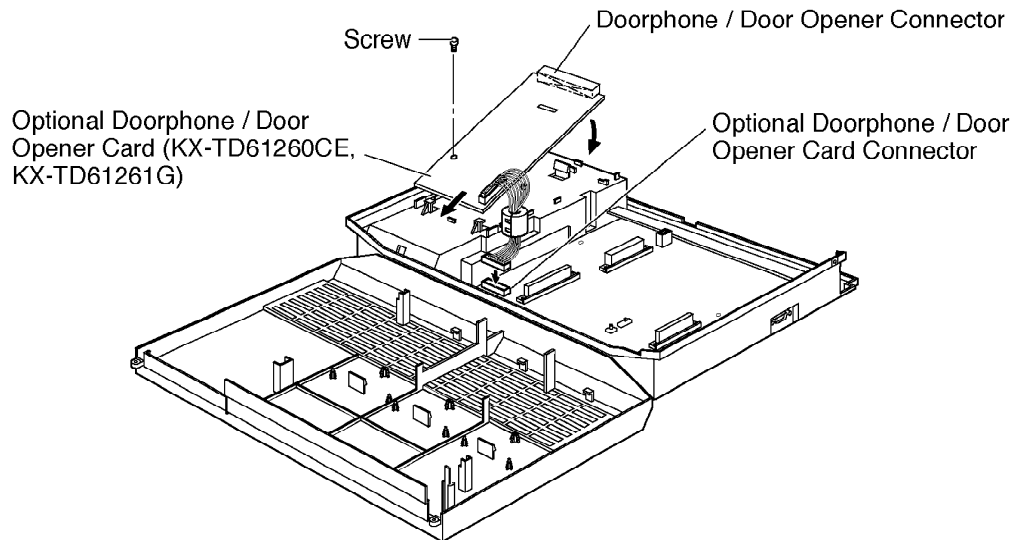
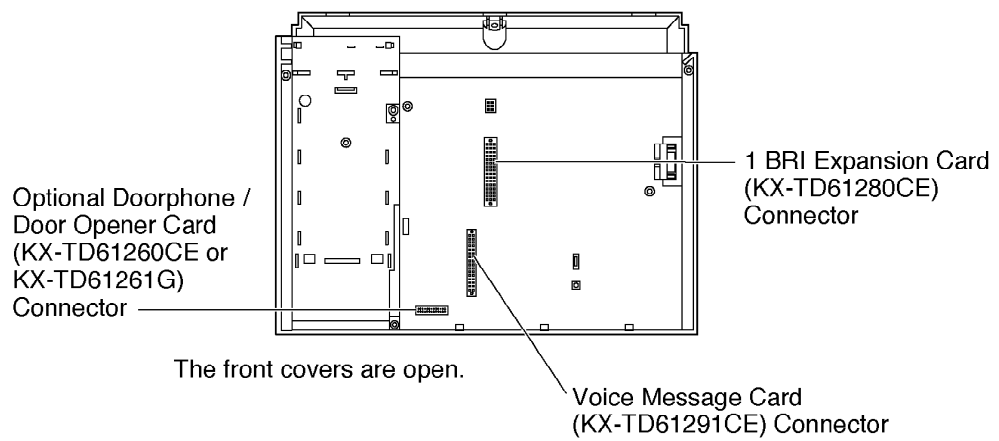
| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C821 | PQCUV1E104MD | 0.1 | S |
| C822 | ECEA1HU330 | 33 | |
| C823 | ECEA1AU221 | 220 | |
| C824 | PQCUV1E104MD | 0.1 | S |
| C829 | PQCUV1E104MD | 0.1 | S |
| | | | |
| C830 | ECEA1EU101 | 100 | |
| C831 | PQCUV1E104MD | 0.1 | S |
| C832 | PQCUV1E104MD | 0.1 | S |
| C832A | PQCUV1E104MD | 0.1 | S |
| C832B | PQCUV1E104MD | 0.1 | S |
| C833 | PQCUV1E104MD | 0.1 | S |
| C834 | ECEA1AU221 | 220 | |
| C835 | ECEA1AU221 | 220 | |

12. KX-TD61261G / (DOORPHONE / DOOROPENER CARD for German type)



12.1. LOCATION OF OPTIONAL CARDS

The location of optional cards is shown below. / / Precaution: To protect the printed circuit boards (PCB) from static electricity. / Do not touch parts on the PCB in the main unit and on the optional cards. / If accessing the parts is required, wear a grounding strap.

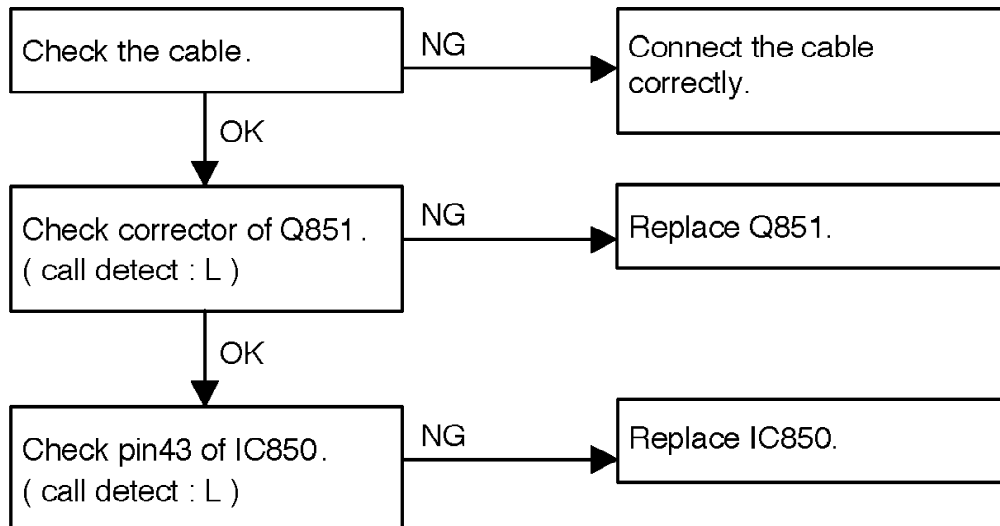


12.2. BLOCK DIAGRAM

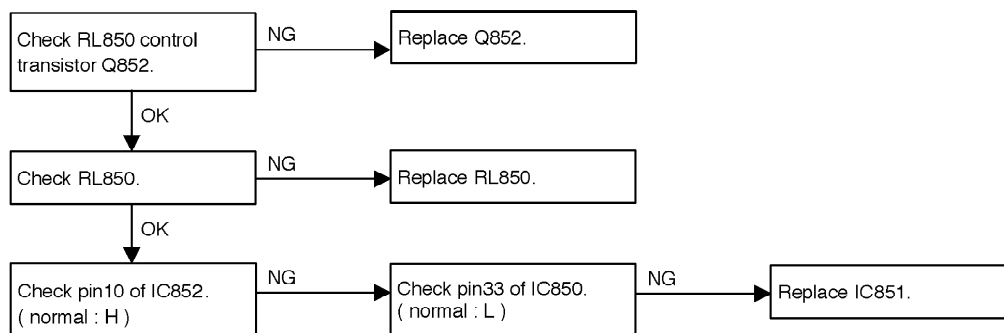
used for the door opener SW.

12.4. TROUBLESHOOTING GUIDE

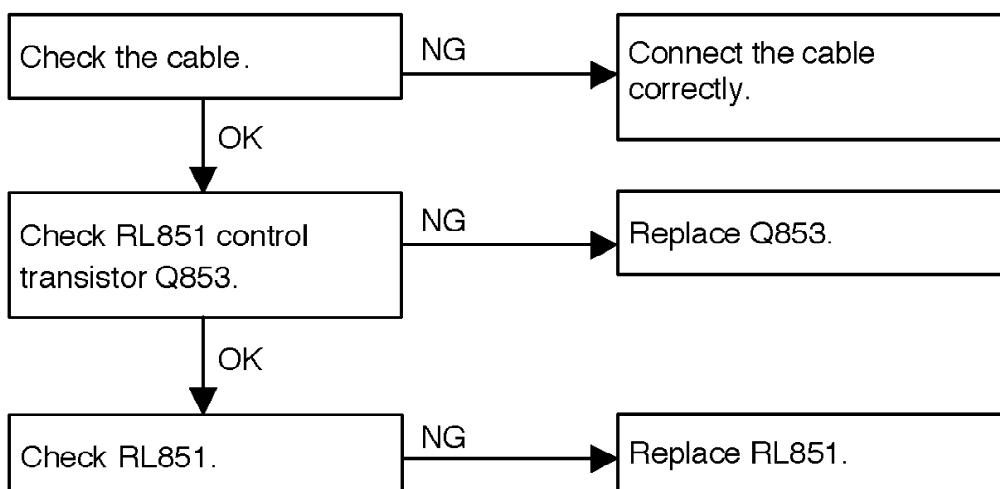
12.4.1. CAN NOT CALL FROM DOORPHONE



12.4.2. CAN NOT TALK



12.4.3. CAN NOT USE DOOROPENER

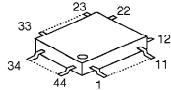
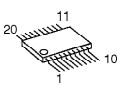


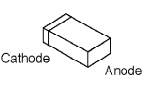


12.5. SCHEMATIC DIAGRAM

12.6. PRINTED CIRCUIT BOARD (COMPONENT VIEW)

12.7. SERVICE INFORMATION

12.7.1. TERMINAL GUIDE OF ICS, TRANSISTORS AND DIODES

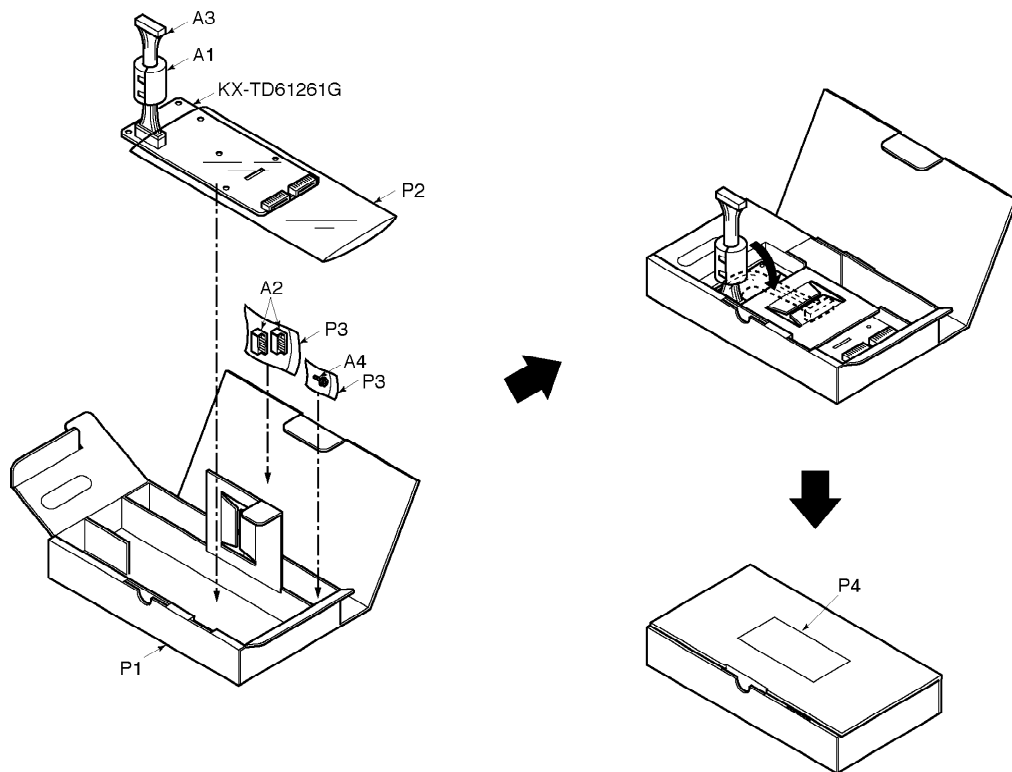
| | | | | |
|---|---|--|---|--|
|  <p>PQVIMS8C5A2K</p> |  <p>PSVIMC45503W</p> |  <p>UN5213, PQVTDTC143E</p> |  <p>PQVITC7SU04F</p> |  <p>MA110</p> |
|---|---|--|---|--|

12.7.2. IC DATA

12.7.2.1. PARALLEL I/O (IC800) PORT MAP

| Pin No. | Pin Name | I/O | Function | Operation |
|---------|------------|-----|---|--------------------------|
| 35 | CARD CODE2 | I | Card detection and code. | L:German L:T30865 H: |
| 36 | CARD CODE1 | I | Card detection and code. | CO / L:German H:T308 |
| 37 | - | - | (Reserved) | - |
| 38 | - | - | (Reserved) | - |
| 40 | - | - | (Reserved) | - |
| 41 | - | - | (Reserved) | - |
| 42 | DCALL-2 | I | Door Phone2 Call | H: normal, L: call dete |
| 43 | DCALL-1 | I | Door Phone1 Call | H: normal, L: call dete |
| 23 | - | - | (Not used) | - |
| 21 | - | - | (Not used) | - |
| 20 | DOPEN-2 | O | Door Opener2 | H: relay on, L: relay of |
| 19 | DOPEN-1 | O | Door Opener1 | H: relay on, L: relay of |
| 18 | DCONT-2 | O | Door Phone2 Power Control | H: power on, L: power |
| 16 | DCONT-1 | O | Door Phone1 Power Control | H: power on, L: power |
| 15 | DRPDN-2 | O | CODEC(for Door-phone2) power control | H: power on, L: power |
| 14 | DRPDN-1 | O | CODEC(for Door-phone1) power control | H: power on, L: power |
| 5 | - | - | (Not used) | - |
| 6 | - | - | (Not used) | - |
| 7 | - | - | (Reserved) | - |
| 8 | - | - | (Reserved) | - |
| 13 | - | - | (Reserved) | - |
| 11 | - | - | (Reserved) | - |
| 10 | - | - | (Reserved) | - |
| 9 | - | - | (Reserved) | - |

12.7.3. ACCESSORIES AND PACKING MATERIALS




13. REPLACEMENT PARTS LIST

This replacement parts list is for KX-TD61261G only.

Refer to the simplified manual (cover) for other areas.

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.
2. Important safety notice / Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors

are in MICRO FARADS (μ F) $P = \mu \mu F / *$ Type & Wattage of Resistor

| | | | | | |
|---------------------|----------|--------------------------------------|-------------|----------------|--|
| Type | | | | | |
| ERC:Solid | | ERX:Metal Film | | PQRD:Carbon | |
| ERD:Carbon | | ERG:Metal Oxide | | PQRQ:Fuse | |
| PQ4R:Chip | | ERO:Metal Film | | ERF:Wire Wound | |
| Wattege | | | | | |
| 10,16,18:1/8W | | 14,25,S2:1/4W | | 12,50,S1:1/2W | |
| 1:1W | | 2:2W | | 5:5W | |
| ECFD:Semi-Conductor | | ECCD,ECKD,PQCBC,PQVP : Ceramic | | | |
| ECQS:Styrol | | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester | | | |
| PQCBX,ECUV:Chip | | ECEA,ECSZ,ECOS : Electrolytic | | | |
| ECMS:Mica | | ECQP : Polypropylene | | | |
| Voltage | | | | | |
| ECQ Type | | ECQG ECQV Type | ECSZ Type | Others | |
| 1H : 50V | 05 : 50V | OF : 3.15V | OJ : 6.3V | 1V : 35V | |
| 2A : 100V | 1 : 100V | 1A : 10V | 1A : 10V | 50,1H : 50V | |
| 2E : 250V | 2 : 200V | 1V : 35V | 1C : 16V | 1J : 63V | |
| 2H : 500V | | OJ : 6.3V | 1E,25 : 25V | 2A : 100V | |

13.1. ACCESSORIES AND PACKING MATERIALS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|-------------|--|----------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| | | | |
| A1 | PQLB5D1 | CORE | S |
| A2 | PSJS08S06Z | CONNECTOR, 8P | |
| A3 | PSJS30Q94Z | CONNECTOR, 30P | |
| A4 | XYN3+F12FN | SCREW WITH WASHER, STEEL | |
| | | | |
| | | | |
| P1 | PSPK1436Z | GIFT BOX | |
| P2 | PSPP1051Z | PROTECTION COVER | |
| P3 | XZB05X08A03 | PROTECTION COVER | |
| P4 | PSQA2155Z | MODEL NO.LABEL | |

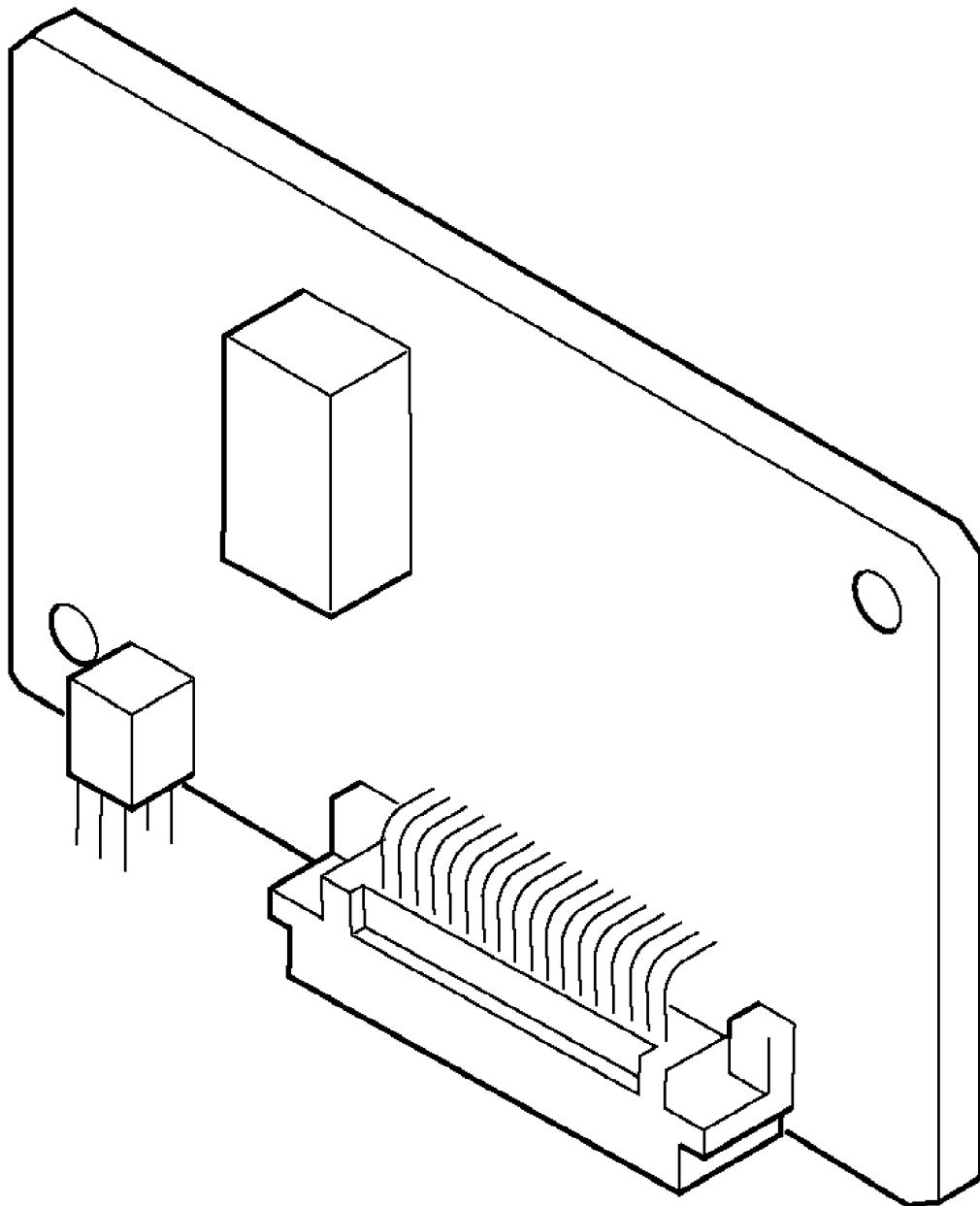
13.2. MAIN BOARD PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | MAIN BOARD PARTS | |
| | | | |
| | | (ICS) | |
| IC850 | PQVIMS8C5A2K | IC | |
| IC851 | PQVITC7SU04F | IC | |
| IC852A | PQVIMC45503W | IC | S |
| IC852B | PQVIMC45503W | IC | S |
| IC853 | PQVITC7SU04F | IC | |
| | | | |
| | | (TRANSISTORS) | |
| Q851A | UN5213 | TRANSISTOR(SI) | S |
| Q851B | UN5213 | TRANSISTOR(SI) | S |
| Q852A | PQVTDTC143E | TRANSISTOR(SI) | |
| Q852B | PQVTDTC143E | TRANSISTOR(SI) | |
| Q853A | PQVTDTC143E | TRANSISTOR(SI) | |
| Q853B | PQVTDTC143E | TRANSISTOR(SI) | |
| | | | |
| | | (DIODES) | |
| D851A | MA110 | DIODE(SI) | |
| D851B | MA110 | DIODE(SI) | |
| D852A | MA110 | DIODE(SI) | |
| D852B | MA110 | DIODE(SI) | |
| | | | |
| | | (COILS) | |
| L850A | PQLE106 | COIL | |
| L850B | PQLE106 | COIL | |
| L851A | PQLE106 | COIL | |
| L851B | PQLE106 | COIL | |
| | | | |
| | | (CONNECTORS) | |
| CN850 | PSJP30A62Z | CONNECTOR, 30P | |
| CN851A | PSJP08B07Z | CONNECTOR, 8P | |
| CN851B | PSJP08B07Z | CONNECTOR, 8P | |
| | | | |
| | | (RELAYS) | |
| RL850A | PSSLG5V1Z | RELAY | |
| RL850B | PSSLG5V1Z | RELAY | |
| RL851A | PSSLG5V1Z | RELAY | |
| RL851B | PSSLG5V1Z | RELAY | |
| | | | |
| | | (VARISTORS) | |
| ZNR85A | PSVDVF05241T | VARISTOR | |
| ZNR85B | PSVDVF05241T | VARISTOR | |
| ZNR86A | PSVDVF05241T | VARISTOR | |
| ZNR86B | PSVDVF05241T | VARISTOR | |
| | | | |
| | | | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | (RESISTORS) | |
| R850A | ERJ14YJ151 | 150 | |
| R850B | ERJ14YJ151 | 150 | |
| R851A | ERJ14YJ822 | 8.2K | |
| R851B | ERJ14YJ822 | 8.2K | |
| R852A | ERJ14YJ822 | 8.2K | |
| R852B | ERJ14YJ822 | 8.2K | |
| R853A | ERJ14YJ151 | 150 | |
| R853B | ERJ14YJ151 | 150 | |
| R854A | ERJ14YJ102 | 1K | |
| R854B | ERJ14YJ102 | 1K | |
| R855A | PQ4R10XJ223 | 22K | S |
| R855B | PQ4R10XJ223 | 22K | S |
| R857A | ERJ14YJ102 | 1K | |
| R857B | ERJ14YJ102 | 1K | |
| R858A | PQ4R10XF3000 | 300 | |
| R858B | PQ4R10XF3000 | 300 | |
| R859A | PQ4R10XJ104 | 100K | S |
| R859B | PQ4R10XJ104 | 100K | S |
| | | | |
| R860A | PQ4R10XJ104 | 100K | S |
| R860B | PQ4R10XJ104 | 100K | S |
| R861A | PQ4R10XF3000 | 300 | |
| R861B | PQ4R10XF3000 | 300 | |
| R862A | PQ4R10XF3001 | 3K | |
| R862B | PQ4R10XF3001 | 3K | |
| R863A | PQ4R10XF3001 | 3K | |
| R863B | PQ4R10XF3001 | 3K | |
| R864A | PQ4R10XJ104 | 100K | S |
| R864B | PQ4R10XJ104 | 100K | S |
| R865A | PQ4R10XJ104 | 100K | S |
| R865B | PQ4R10XJ104 | 100K | S |
| R866A | PQ4R10XJ563 | 56K | S |
| R866B | PQ4R10XJ563 | 56K | S |
| R867A | PQ4R10XJ104 | 100K | S |
| R867B | PQ4R10XJ104 | 100K | S |
| R868A | PQ4R10XJ154 | 150K | S |
| R868B | PQ4R10XJ154 | 150K | S |
| R869A | PQ4R10XJ154 | 150K | S |
| R869B | PQ4R10XJ154 | 150K | S |
| | | | |
| R875 | PQ4R10XJ330 | 33 | S |
| R876 | PQ4R10XJ330 | 33 | S |
| R877 | PQ4R10XJ330 | 33 | S |
| R878 | PQ4R10XJ330 | 33 | S |
| R879 | PQ4R10XJ330 | 33 | S |
| | | | |
| R880 | PQ4R10XJ330 | 33 | S |
| R881 | PQ4R10XJ330 | 33 | S |
| R882 | PQ4R10XJ330 | 33 | S |
| R883 | PQ4R10XJ330 | 33 | S |
| R884 | PQ4R10XJ330 | 33 | S |
| R885 | PQ4R10XJ330 | 33 | S |
| R886 | PQ4R10XJ330 | 33 | S |

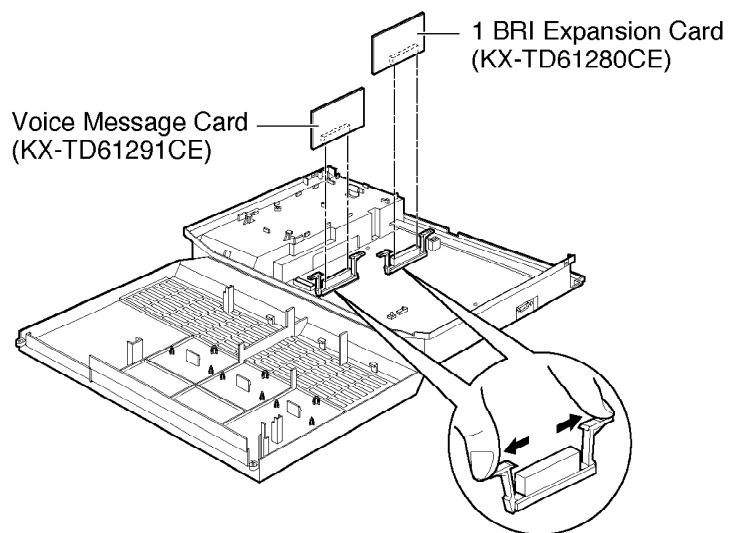
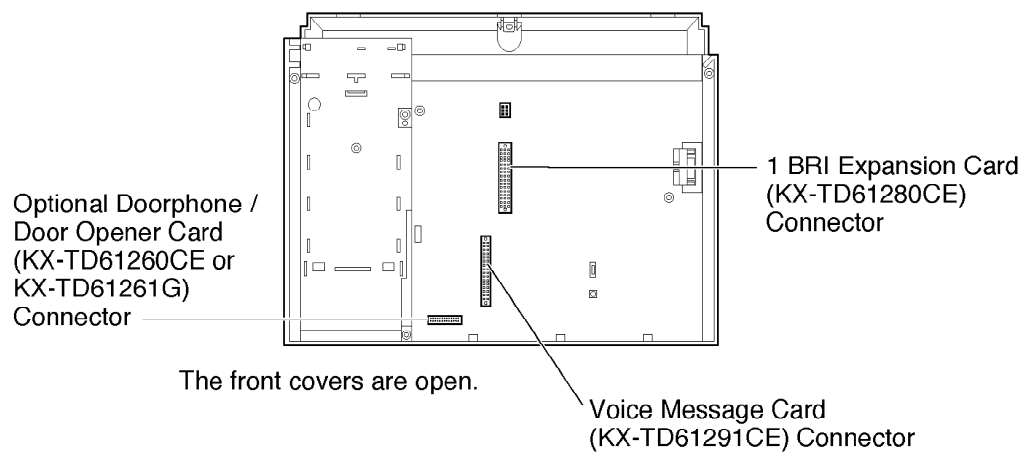
| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R887 | PQ4R10XJ330 | 33 | S |
| R888 | PQ4R10XJ330 | 33 | S |
| R889 | PQ4R10XJ330 | 33 | S |
| | | | |
| R890 | PQ4R10XJ330 | 33 | S |
| R891 | PQ4R10XJ330 | 33 | S |
| R892 | PQ4R10XJ473 | 47K | S |
| R893 | PQ4R10XJ473 | 47K | S |
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C850A | ECEA1EKN4R7 | 4.7 | |
| C850B | ECEA1EKN4R7 | 4.7 | |
| C851A | ECEA1EKN4R7 | 4.7 | |
| C851B | ECEA1EKN4R7 | 4.7 | |
| C852A | PSCUV2EY104K | 0.1 | |
| C852B | PSCUV2EY104K | 0.1 | |
| C853A | PSCUV2EY104K | 0.1 | |
| C853B | PSCUV2EY104K | 0.1 | |
| C854A | PQCUV1C474KB | 0.47 | |
| C854B | PQCUV1C474KB | 0.47 | |
| C856A | PQCUV1H102J | 0.001 | S |
| C856B | PQCUV1H102J | 0.001 | S |
| C857A | PQCUV1H102J | 0.001 | S |
| C857B | PQCUV1H102J | 0.001 | S |
| C858A | PQCUV1E104MD | 0.1 | S |
| C858B | PQCUV1E104MD | 0.1 | S |
| C859A | PQCUV1E104MD | 0.1 | S |
| C859B | PQCUV1E104MD | 0.1 | S |
| | | | |
| C860 | PQCUV1H470JC | 47P | |
| C861 | PQCUV1E104MD | 0.1 | S |
| C862 | ECEA1HU101 | 100 | |
| C863 | ECEA1AU101 | 100 | |
| C864 | PQCUV1E104MD | 0.1 | S |
| C865 | PQCUV1E104MD | 0.1 | S |
| C866 | PQCUV1E104MD | 0.1 | S |
| C867 | PQCUV1E104MD | 0.1 | S |

14. KX-TD61280CE / (1 BRI Expansion Card)

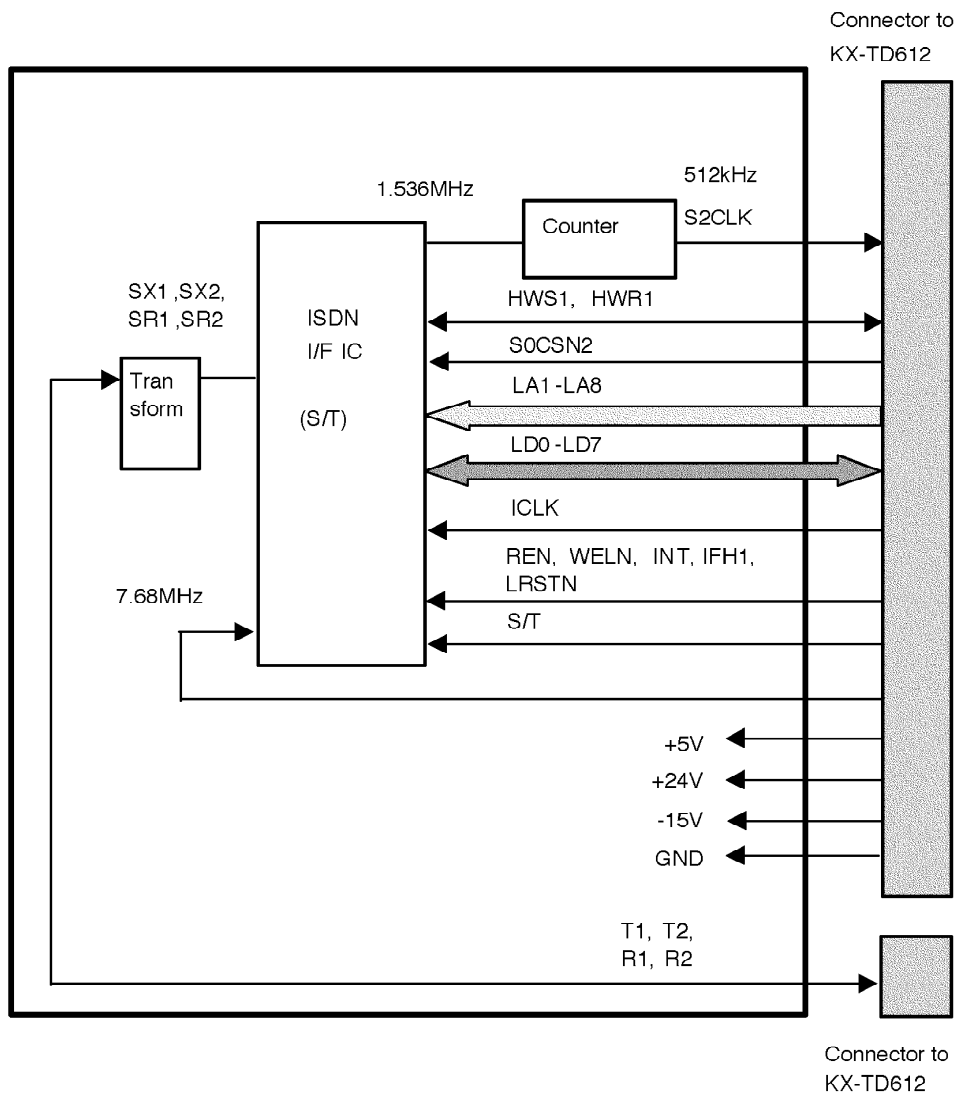


14.1. LOCATION OF OPTIONAL CARDS

The location of optional cards is shown below. / / Precaution: To protect the printed circuit boards (PCB) from static electricity. / Do not touch parts on the PCB in the main unit and on the optional cards. / If accessing the parts is required, wear a grounding strap.



14.2. BLOCK DIAGRAM



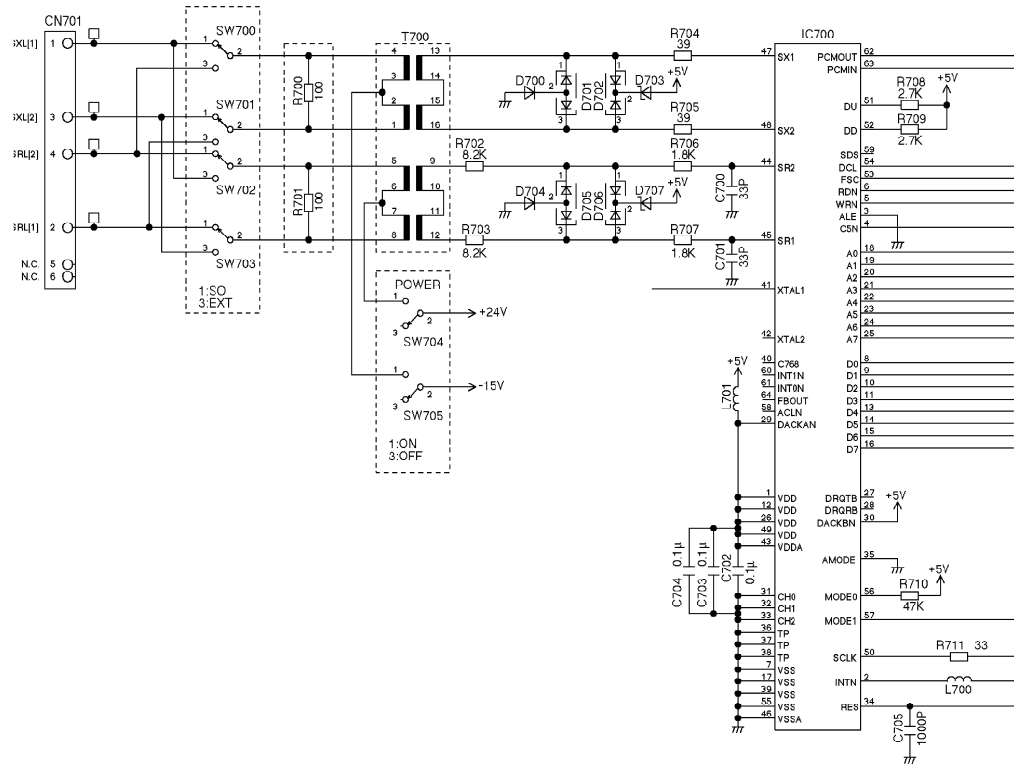
14.3. EXPLANATION OF BLOCK DIAGRAM / CIRCUIT OPERATION

14.3.1. OPTION CARD (KX-TD61280CE)

Composition: / ISDN I/F IC (IC700) / ISDN Transformer (T700) /

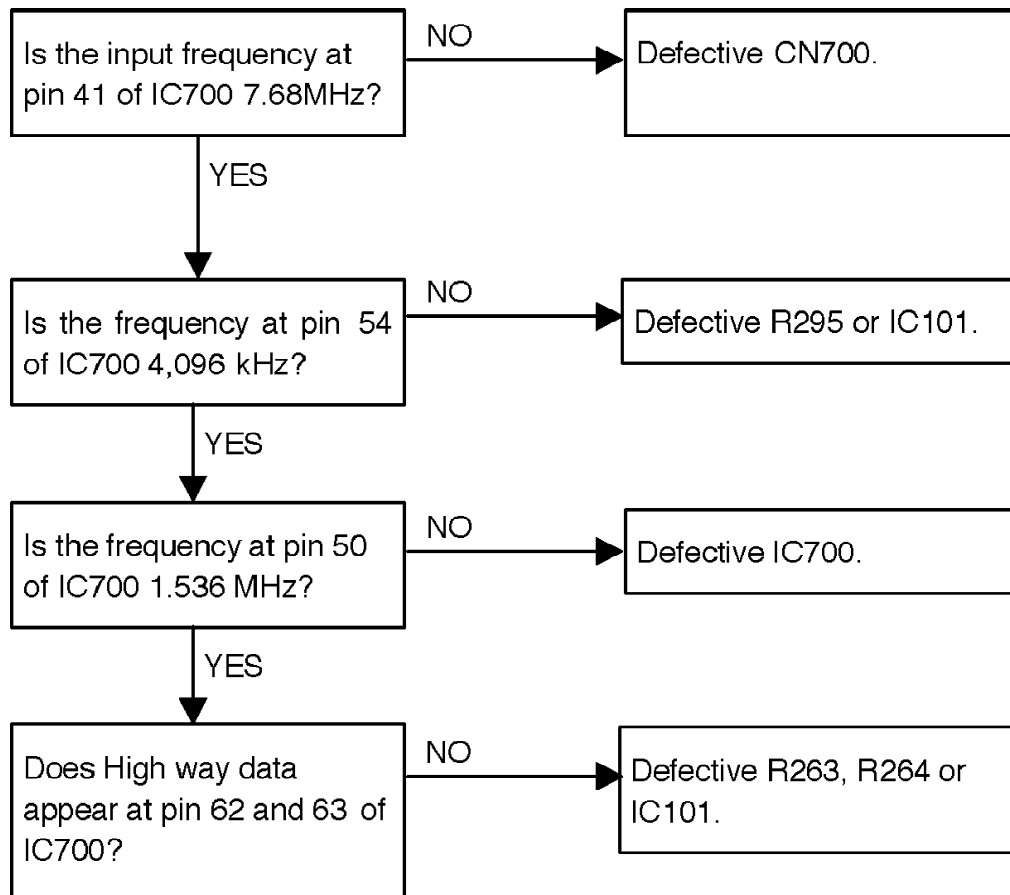
Circuit Operation: / This circuit has the S-Bus interface circuit and the ISDN lower LAYER (LAYER 1 only) control circuit. / The component switches B and D channel between the S/T interface and the PCM Highway I/F.

Circuit Diagram



14.4. TROUBLESHOOTING GUIDE

14.4.1. CAN NOT ACCESS TO ISDN

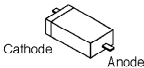
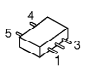
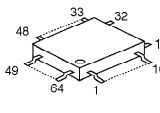
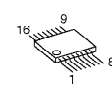
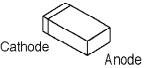
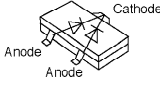


14.5. SCHEMATIC DIAGRAM

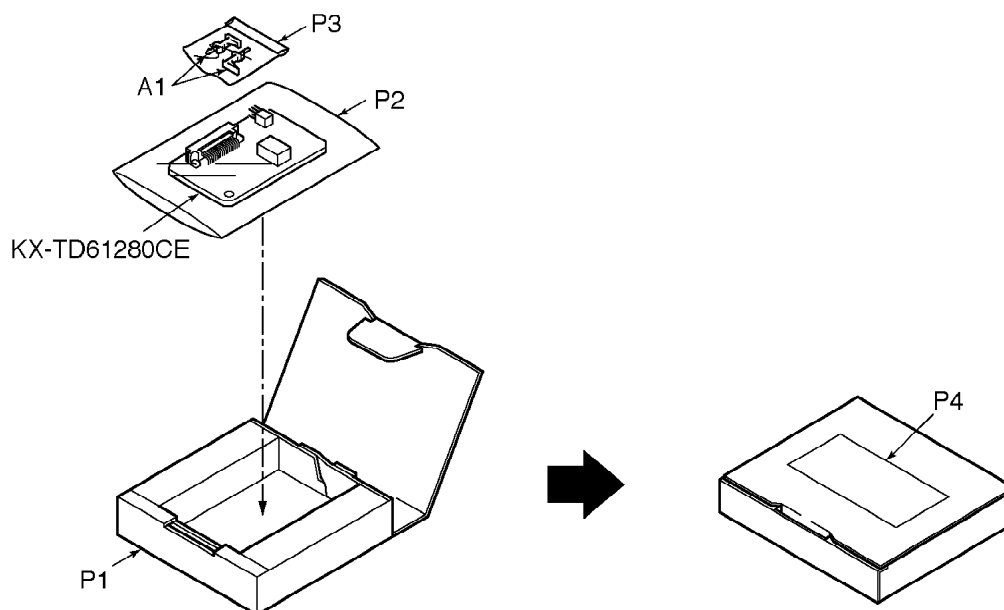
14.6. PRINTED CIRCUIT BOARD (COMPONENT VIEW)

14.7. SERVICE INFORMATION

14.7.1. TERMINAL GUIDE OF ICS, TRANSISTORS AND DIODES

| | | | | |
|--|---|--|---|--|
|  PSVDUDZ20B |  PQVITC7SU04F |  PSVIP2115F2 |  PSVITC7H163A, PSVISN7H163A |  MA110 |
|  PSVD1SS300TL, PSVD1SS301TL | | | | |

14.7.2. ACCESSORIES AND PACKING MATERIALS



15. REPLACEMENT PARTS LIST

This replacement parts list is for KX-TD61280CE only.

Refer to the simplified manual (cover) for other areas.

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.
2. Important safety notice / Components identified by \triangle mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors are in MICRO FARADS (μ F) P= μ μ F / *Type & Wattage of Resistor

| | | | | | |
|---------------------|--------------------------------------|----------------|-------------|-------------|------|
| Type | | | | | |
| ERC:Solid | ERX:Metal Film | PQRD:Carbon | | | |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse | | | |
| PQ4R:Chip | ERO:Metal Film | ERF:Wire Wound | | | |
| Wattege | | | | | |
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W | 5:5W |
| | | | | | |
| ECFD:Semi-Conductor | ECCD,ECKD,PQCB,C,PQVP : Ceramic | | | | |
| ECQS:Styrol | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester | | | | |
| PQCBX,ECUV:Chip | ECEA,ECSZ,ECOS : Electrolytic | | | | |
| ECMS:Mica | ECQP : Polypropylene | | | | |
| Voltage | | | | | |
| ECQ Type | ECQG ECQV Type | ECSZ Type | Others | | |
| 1H : 50V | 05 : 50V | OF : 3.15V | OJ : 6.3V | 1V : 35V | |
| 2A : 100V | 1 : 100V | 1A : 10V | 1A : 10V | 50,1H : 50V | |
| 2E : 250V | 2 : 200V | 1V : 35V | 1C : 16V | 1J : 63V | |
| 2H : 500V | | OJ : 6.3V | 1E,25 : 25V | 2A : 100V | |

15.1. ACCESSORIES AND PACKING MATERIALS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|-------------|--|---------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| | | | |
| A1 | PSHR1202Z | SPACER | |
| | | | |
| | | | |
| P1 | PSPK1655Z | GIFT BOX | |
| P2 | PSPP1048Z | PROTECTION COVER | |
| P3 | XZB05X08A03 | PROTECTION COVER | |
| P4 | PSQA2149Z | MODEL NO.LABEL | |

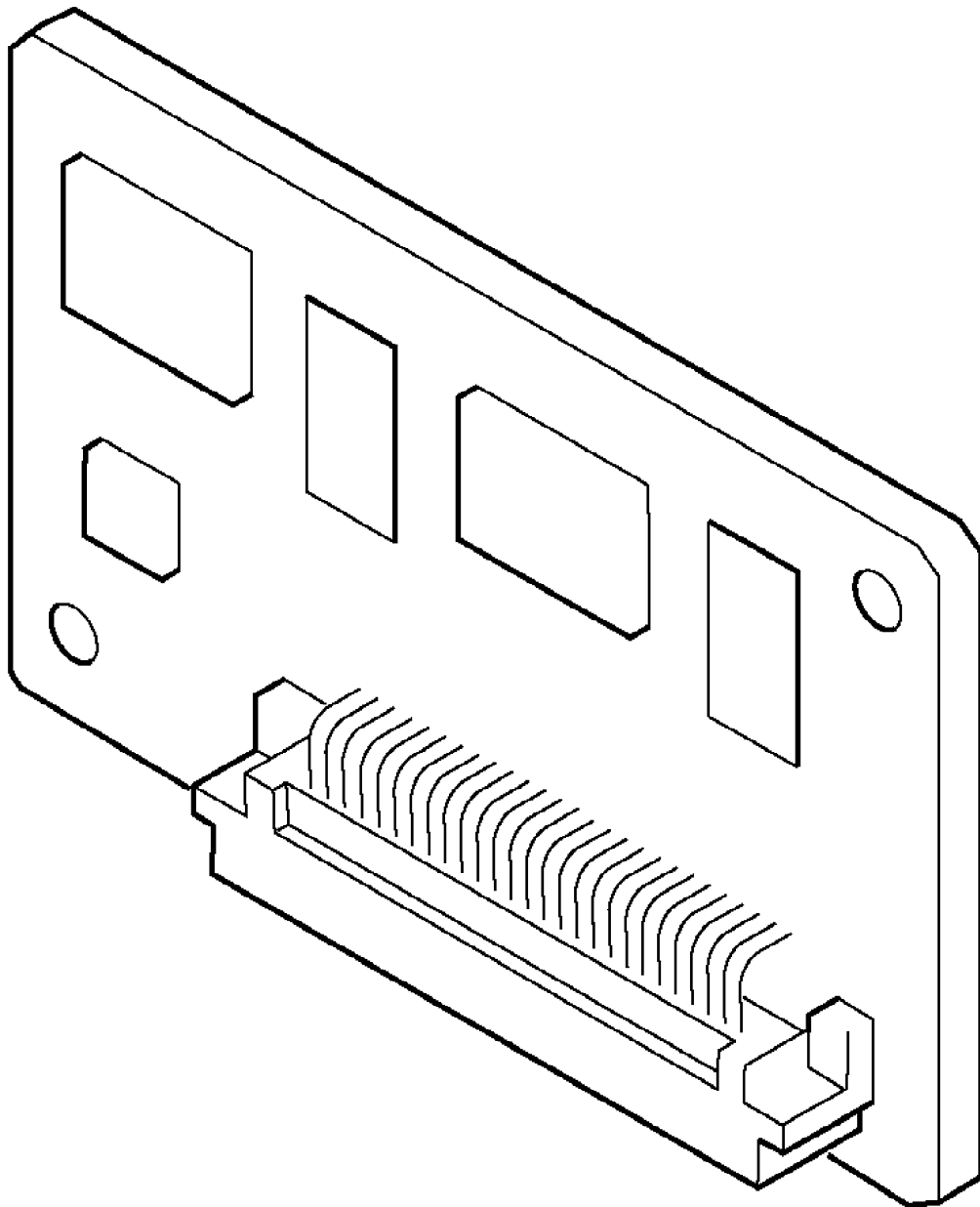
15.2. MAIN BOARD PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|----------|
| | | MAIN BOARD PARTS | |
| | | | |
| | | | |
| | | (ICS) | |
| IC700 | PSVIPS2115F2 | IC | |
| IC701 | PSVITC7H163A | IC | |
| IC702 | PQVITC7SU04F | IC | |
| | | | |
| | | | |
| | | (DIODES) | |
| D700 | MA110 | DIODE(SI) | |
| D701 | PSVD1SS300TL | DIODE(SI) | |
| D702 | PSVD1SS301TL | DIODE(SI) | |
| D703 | PSVDUDZ20B | DIODE(SI) | S |
| D704 | MA110 | DIODE(SI) | |
| D705 | PSVD1SS300TL | DIODE(SI) | |
| D706 | PSVD1SS301TL | DIODE(SI) | |
| D707 | PSVDUDZ20B | DIODE(SI) | S |
| | | | |
| | | | |
| | | (COILS) | |
| L700 | PQLQR2BT | COIL | S |
| L701 | PQLQR1T2R2M | COIL | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | | |
| | | | |
| | | (CONNECTORS) | |
| CN700 | PSJP48B13Z | CONNECTOR, 48P | |
| CN701 | PSJP06B14Z | CONNECTOR, 6P | |
| | | | |
| PLUG 1 | PQJS02S12Z | CONNECTOR, 2P | |
| PLUG 2 | PSJS02S09Z | CONNECTOR, 2P | |
| | | | |
| SW700 | PQJP03G47X | CONNECTOR, 3P | |
| SW701 | PQJP03G47X | CONNECTOR, 3P | |
| SW702 | PQJP03G47X | CONNECTOR, 3P | |
| SW703 | PQJP03G47X | CONNECTOR, 3P | |
| SW704 | PSJP03B12Z | CONNECTOR, 3P | |
| SW705 | PSJP03B12Z | CONNECTOR, 3P | |
| | | | |
| | | | |
| | | (TRANSFORMER) | |
| T700 | PSLT9Z15A | TRANSFORMER | |
| | | | |
| | | | |
| | | (RESISTORS) | |
| R700 | ERDS2TJ101 | 100 | |
| R701 | ERDS2TJ101 | 100 | |
| R702 | ERJ3GEYJ822 | 8.2K | |
| R703 | ERJ3GEYJ822 | 8.2K | |
| R704 | ERJ3GEYJ390 | 39 | |
| R705 | ERJ3GEYJ390 | 39 | |
| R706 | ERJ3GEYJ182V | 1.8K | |
| R707 | ERJ3GEYJ182V | 1.8K | |
| R708 | ERJ3GEYJ272 | 2.7K | |
| R709 | ERJ3GEYJ272 | 2.7K | |
| | | | |
| R710 | ERJ3GEYJ473 | 47K | |
| R711 | ERJ3GEYJ101 | 100 | |
| R712 | ERJ3GEYJ473 | 47K | |
| R713 | ERJ3GEYJ330 | 33 | |
| R714 | ERJ3GEY0R00 | 0 | |
| R715 | ERJ3GEY0R00 | 0 | |
| R716 | ERJ3GEY0R00 | 0 | |
| R717 | ERJ3GEY0R00 | 0 | |
| R718 | ERJ3GEY0R00 | 0 | |
| R719 | ERJ3GEY0R00 | 0 | |
| | | | |
| R720 | ERJ3GEY0R00 | 0 | |
| R721 | ERJ3GEY0R00 | 0 | |
| R722 | ERJ3GEY0R00 | 0 | |
| R723 | ERJ3GEY0R00 | 0 | |
| R724 | ERJ3GEY0R00 | 0 | |
| R725 | ERJ3GEY0R00 | 0 | |
| R726 | ERJ3GEY0R00 | 0 | |
| R727 | ERJ3GEY0R00 | 0 | |
| R728 | ERJ3GEY0R00 | 0 | |
| R729 | ERJ3GEY0R00 | 0 | |

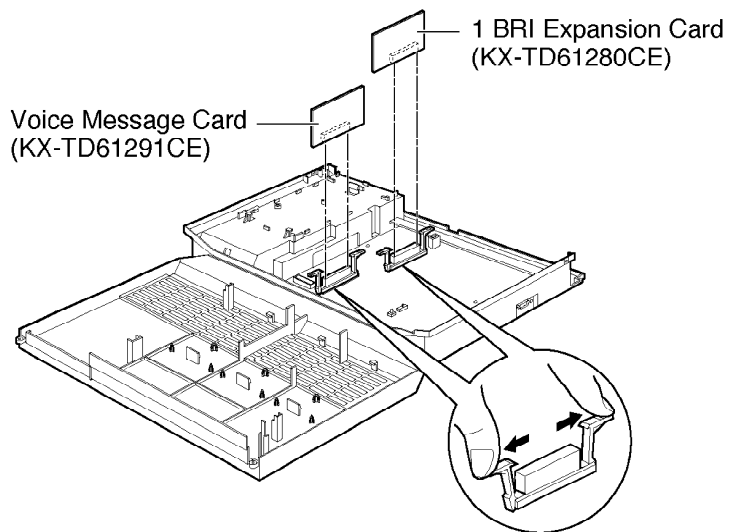
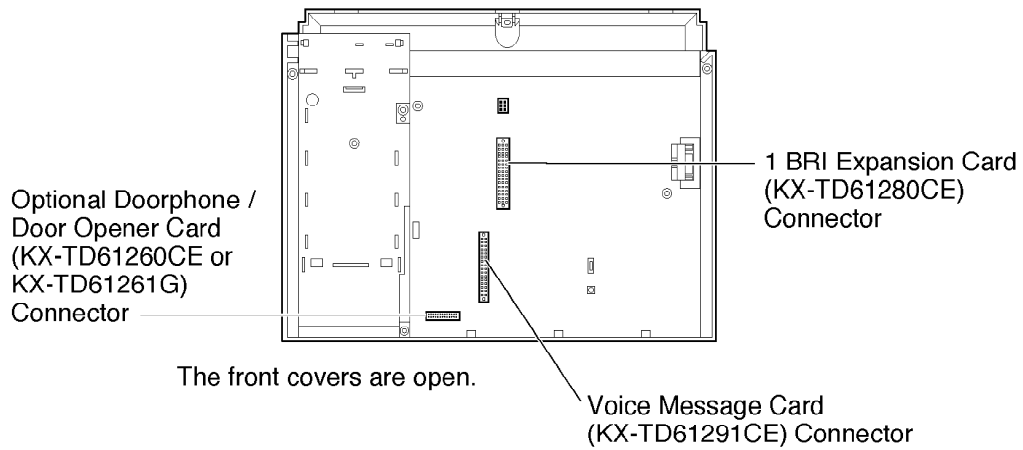
| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C700 | ECUV1H330JCV | 33P | |
| C701 | ECUV1H330JCV | 33P | |
| C702 | ECUV1C104KBV | 0.1 | S |
| C703 | ECUV1C104KBV | 0.1 | S |
| C704 | ECUV1C104KBV | 0.1 | S |
| C705 | ECUV1H102KBV | 0.001 | S |
| C706 | ECUV1C104KBV | 0.1 | S |
| C707 | ECUV1C104KBV | 0.1 | S |
| C708 | ECUV1H470JCV | 47P | |

16. KX-TD61291CE / (Voice Message CARD)

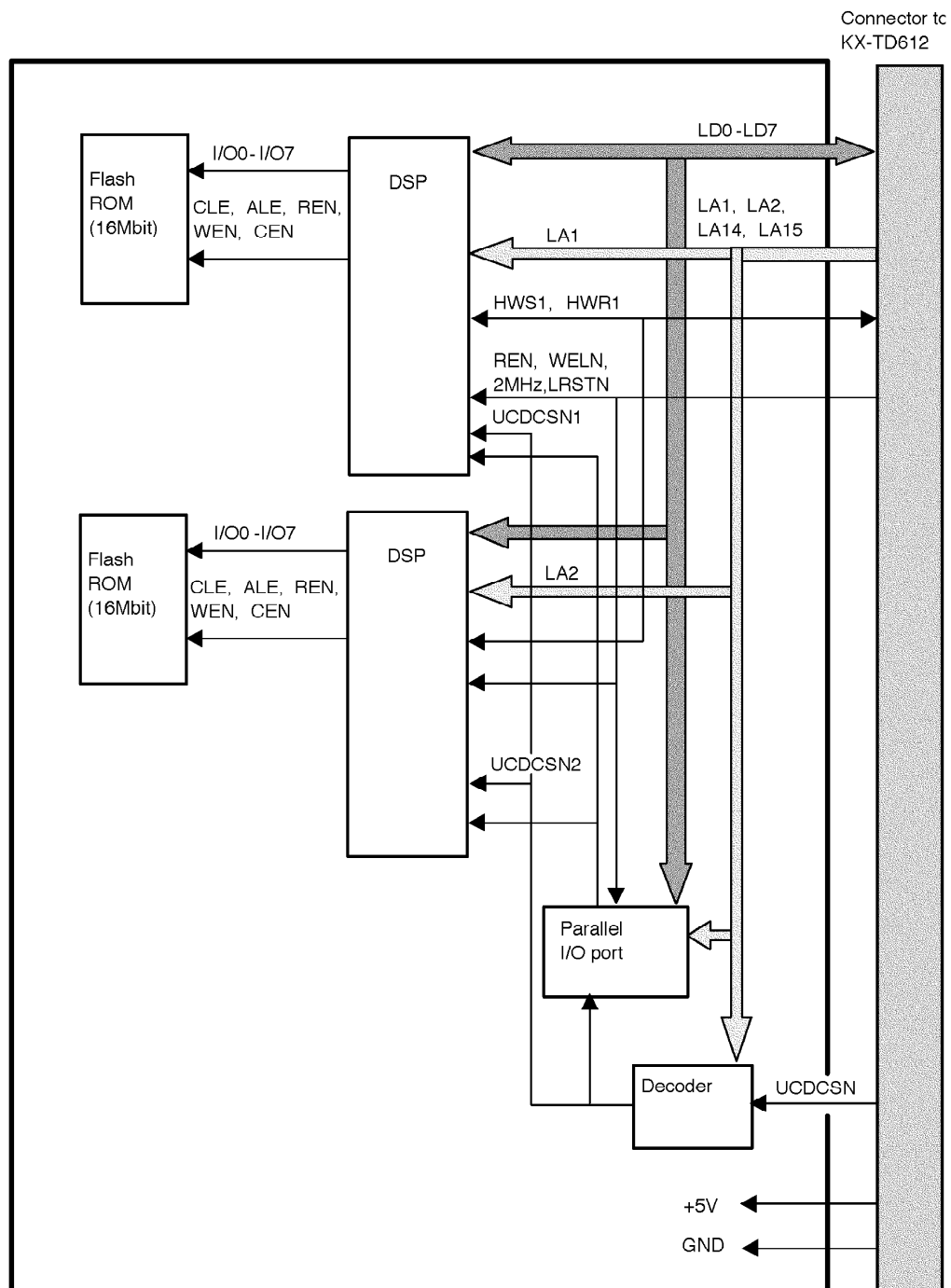


16.1. LOCATION OF OPTIONAL CARDS

The location of optional cards is shown below. / / Precaution: To protect the printed circuit boards (PCB) from static electricity. / Do not touch parts on the PCB in the main unit and on the optional cards. / If accessing the parts is required, wear a grounding strap.



16.2. BLOCK DIAGRAM



16.3. EXPLANATION OF BLOCK DIAGRAM / CIRCUIT OPERATION

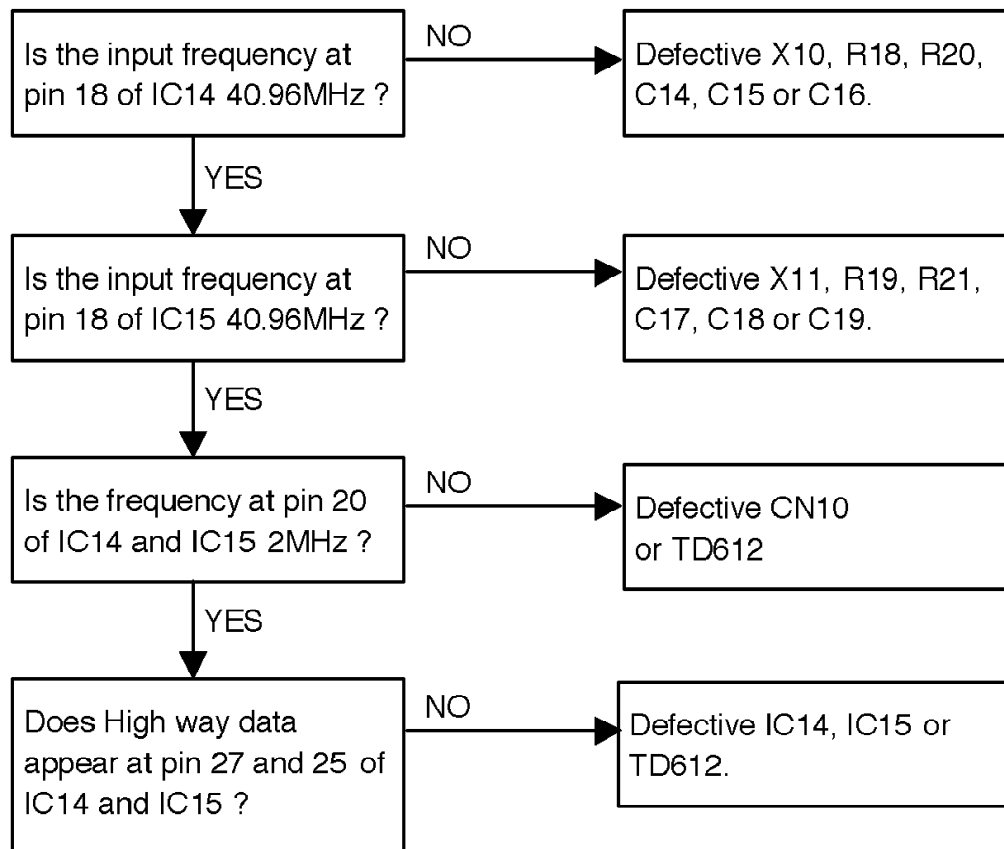
16.3.1. OPTION CARD (KX-TD61291CE)

Composition: / DSP IC (IC14, IC15) / Flash ROM (IC10, IC12) /

Circuit Operation: / This card has two voice message circuits. The voice message circuit is composed of DSP and Flash ROM. / DSP has the functions that PCM recording and playback, voice prompting, tone detection and generation. / DSP stores Flash ROM with voice data and voice prompt.

16.4. TROUBLESHOOTING GUIDE

16.4.1. NO OPERATION

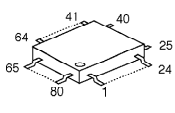
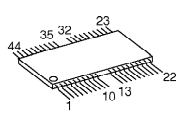
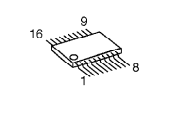
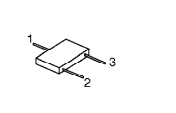
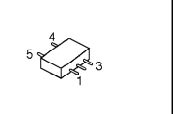
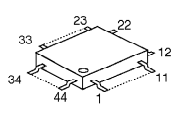


16.5. SCHEMATIC DIAGRAM

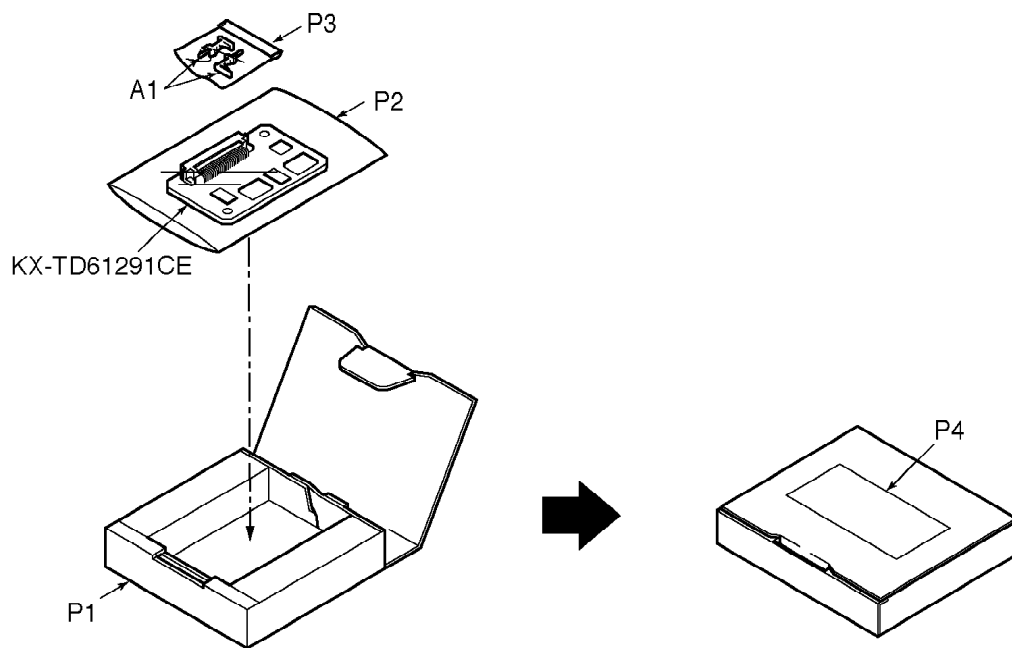
16.6. PRINTED CIRCUIT BOARD

16.7. SERVICE INFORMATION

16.7.1. TERMINAL GUIDE OF ICS, TRANSISTORS AND DIODES

| | | | | |
|---|---|---|---|---|
|  <p>PSVID6571AB</p> |  <p>PSVIKM9W16MT</p> |  <p>PSVITCVT138T</p> |  <p>PSVIPSG600CMT</p> |  <p>PQVITC7SU04F</p> |
|  <p>PQVIMS8C5A2K</p> | | | | |

16.7.2. ACCESSORIES AND PACKING MATERIALS



17. REPLACEMENT PARTS LIST

This replacement parts list is for KX-TD61291CE only.
Refer to the simplified manual (cover) for other areas.

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.
2. Important safety notice / Components identified by \triangle mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors are in MICRO FARADS (μ F) P= μ μ F / *Type & Wattage of Resistor

| | | | | | |
|---------------------|--------------------------------------|----------------|-------------|-------------|------|
| Type | | | | | |
| ERC:Solid | ERX:Metal Film | PQRD:Carbon | | | |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse | | | |
| PQ4R:Chip | ERO:Metal Film | ERF:Wire Wound | | | |
| Wattege | | | | | |
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W | 5:5W |
| | | | | | |
| ECFD:Semi-Conductor | ECCD,ECKD,PQCBQ,PQVP : Ceramic | | | | |
| ECQS:Styrol | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester | | | | |
| PQCBX,ECUV:Chip | ECEA,ECSZ,ECOS : Electrolytic | | | | |
| ECMS:Mica | ECQP : Polypropylene | | | | |
| Voltage | | | | | |
| ECQ Type | ECQG ECQV Type | ECSZ Type | Others | | |
| 1H : 50V | 05 : 50V | OF : 3.15V | OJ : 6.3V | 1V : 35V | |
| 2A : 100V | 1 : 100V | 1A : 10V | 1A : 10V | 50,1H : 50V | |
| 2E : 250V | 2 : 200V | 1V : 35V | 1C : 16V | 1J : 63V | |
| 2H : 500V | | OJ : 6.3V | 1E,25 : 25V | 2A : 100V | |

17.1. ACCESSORIES AND PACKING MATERIALS

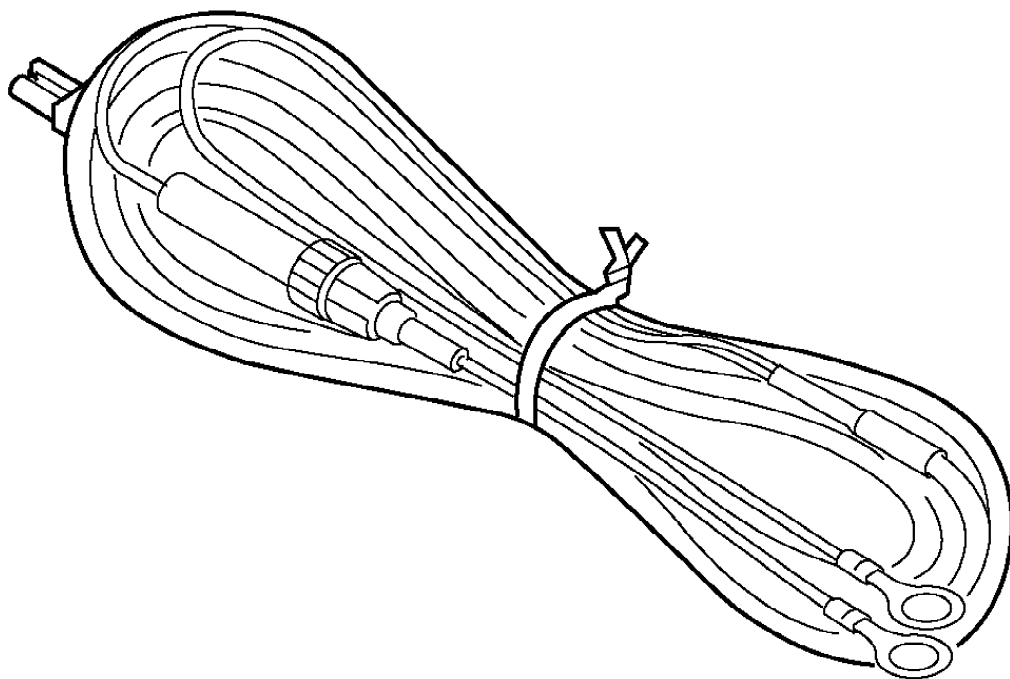
| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|-------------|--|---------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| | | | |
| A1 | PSHR1202Z | LOCK SPACER | |
| | | | |
| | | | |
| P1 | PSPK1655Z | GIFT BOX | |
| P2 | PSPP1048Z | PROTECTION COVER | |
| P3 | XZB05X08A03 | PROTECTION COVER | |
| P4 | PSQA2151Z | MODEL NO.LABEL | |

17.2. MAIN BOARD PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|----------|
| | | MAIN BOARD PARTS | |
| | | | |
| | | | |
| | | (ICS) | |
| IC10 | PSVIKM9W16MT | IC | |
| IC12 | PSVIKM9W16MT | IC | |
| IC14 | PSVID6571AB | IC | S |
| IC15 | PSVID6571AB | IC | S |
| IC16 | PQVIMS8C5A2K | IC | |
| IC17 | PSVITCVT138T | IC | |
| IC18 | PQVITC7SU04F | IC | |
| IC19 | PSVIPS600CMT | IC | |
| | | | |
| | | | |
| | | (CONNECTOR) | |
| CN10 | PSJP44A83Z | CONNECTOR, 44P | |
| | | | |
| | | | |
| | | (CRYSTAL OSCILLATORS) | |
| X10 | PSVCC0029GT | CRYSTAL OSCILLATOR | |
| X11 | PSVCC0029GT | CRYSTAL OSCILLATOR | |
| | | | |
| | | | |

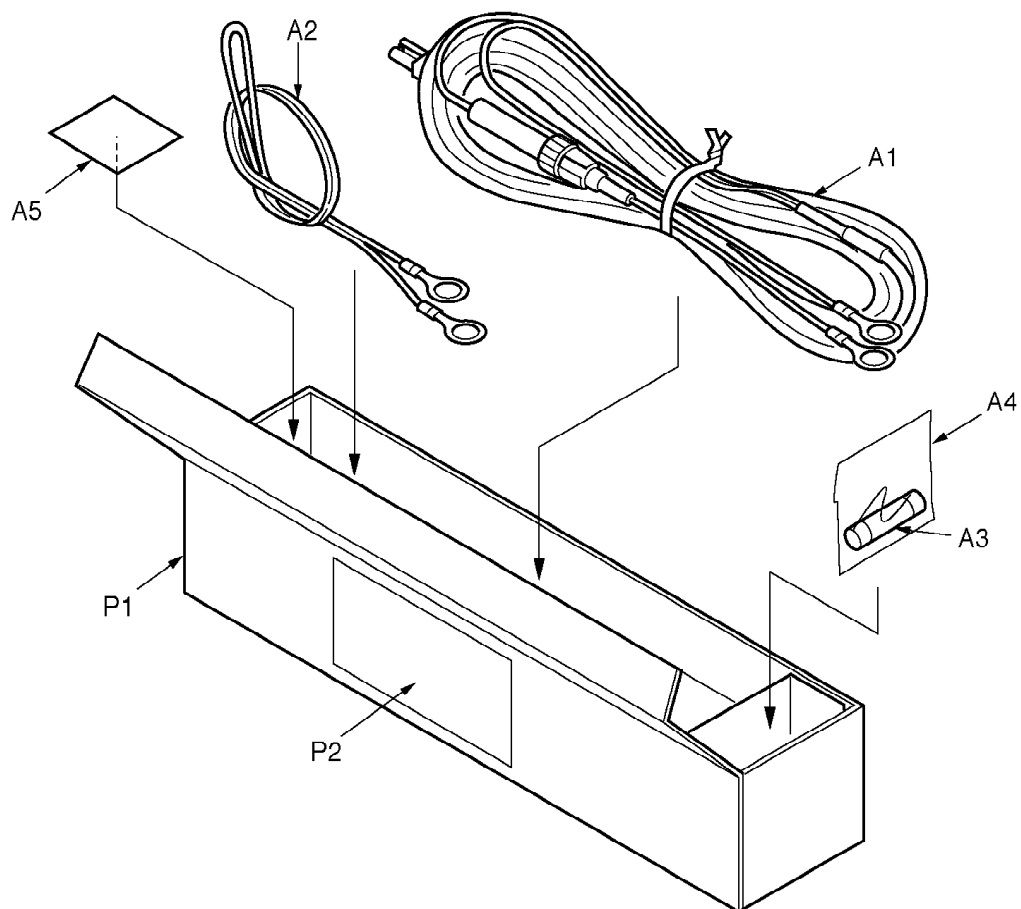
| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| | | (RESISTORS) | |
| R10 | ERJ3GEYJ473 | 47K | |
| R11 | ERJ3GEYJ473 | 47K | |
| R15 | ERJ3GEYJ473 | 47K | |
| R18 | ERJ3GEYJ105 | 1M | |
| R19 | ERJ3GEYJ105 | 1M | |
| | | | |
| R20 | ERJ3GEY0R00 | 0 | |
| R21 | ERJ3GEY0R00 | 0 | |
| R22 | ERJ3GEY0R00 | 0 | |
| R23 | ERJ3GEY0R00 | 0 | |
| R24 | ERJ3GEY0R00 | 0 | |
| R25 | ERJ3GEY0R00 | 0 | |
| R26 | ERJ3GEY0R00 | 0 | |
| R27 | ERJ3GEY0R00 | 0 | |
| R28 | ERJ3GEY0R00 | 0 | |
| R29 | ERJ3GEY0R00 | 0 | |
| | | | |
| R30 | ERJ3GEY0R00 | 0 | |
| R31 | ERJ3GEY0R00 | 0 | |
| | | | |
| C16 | ERJ3GEY0R00 | 0 | |
| C19 | ERJ3GEY0R00 | 0 | |
| | | | |
| | | | |
| | | (CAPACITORS) | |
| C10 | ECUV1C104KBV | 0.1 | S |
| C12 | ECUV1C104KBV | 0.1 | S |
| C14 | ECUV1H010CCV | 1P | |
| C15 | ECUV1H010CCV | 1P | |
| C17 | ECUV1H010CCV | 1P | |
| C18 | ECUV1H010CCV | 1P | |
| | | | |
| C20 | ECUV1C104KBV | 0.1 | S |
| C21 | ECUV1C104KBV | 0.1 | S |
| C22 | ECUV1C104KBV | 0.1 | S |
| C23 | ECUV1C104KBV | 0.1 | S |
| C24 | ECUV1C104KBV | 0.1 | S |
| C25 | ECUV1C104KBV | 0.1 | S |
| C26 | ECUV1C104KBV | 0.1 | S |
| | | | |
| C31 | ECUV1C104KBV | 0.1 | S |
| C32 | ECUV1C104KBV | 0.1 | S |
| C33 | ECUV1C104KBV | 0.1 | S |
| C34 | ECUV1C104KBV | 0.1 | S |

18. KX-A227X / (BACK-UP BATTERY CABLE)



18.1. SERVICE INFORMATION

18.1.1. ACCESSORIES AND PACKING MATERIALS




19. REPLACEMENT PARTS LIST

This replacement parts list is for KX-A227X only.

Refer to the simplified manual (cover) for other areas.

Notes:

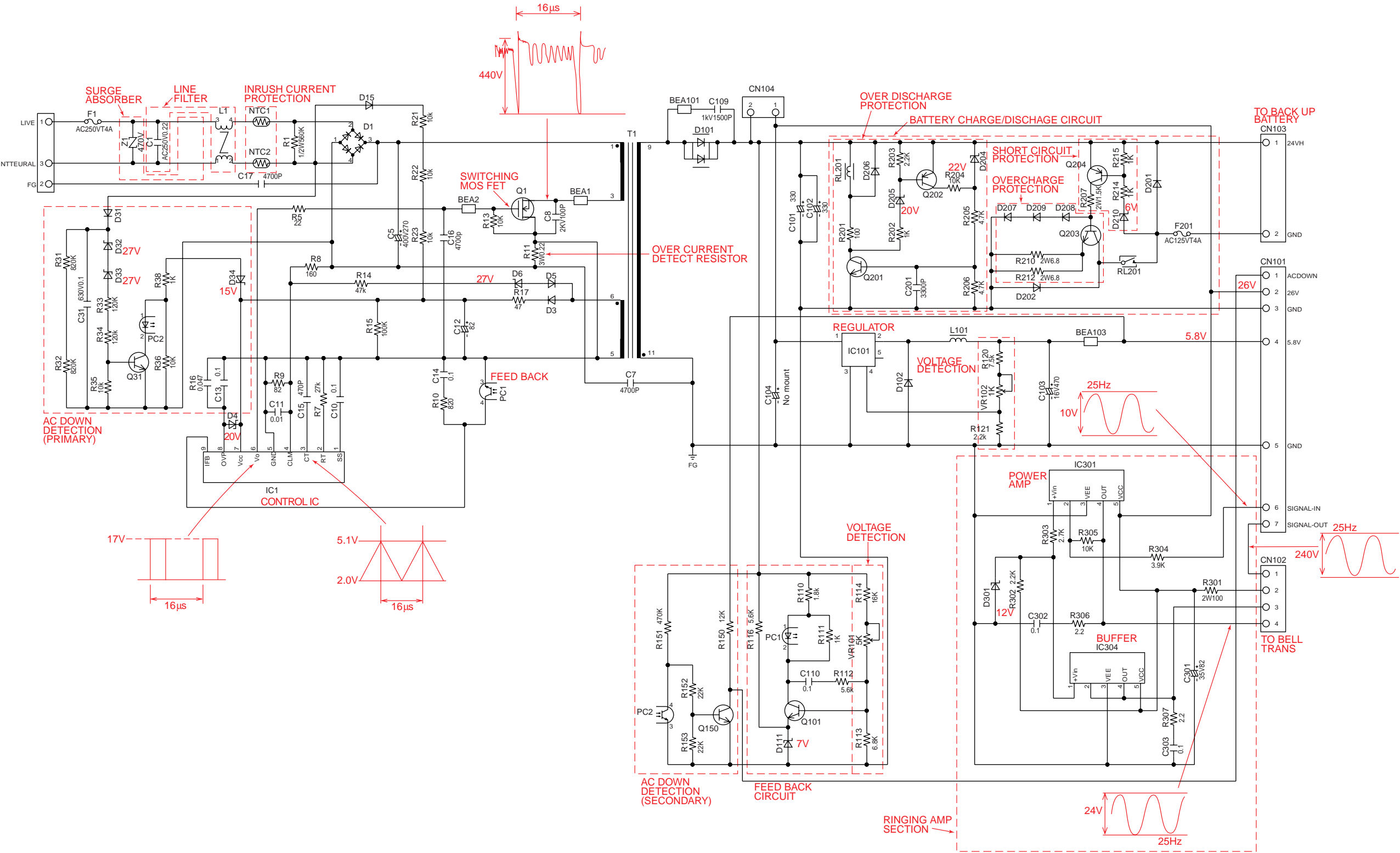
1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.
2. Important safety notice / Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS / Unless otherwise specified; / All resistors are in ohms (Ω) K=1000 Ω , M=1000k Ω / All capacitors are in MICRO FARADS (μ F) P= μ μ F / *Type & Wattage of Resistor

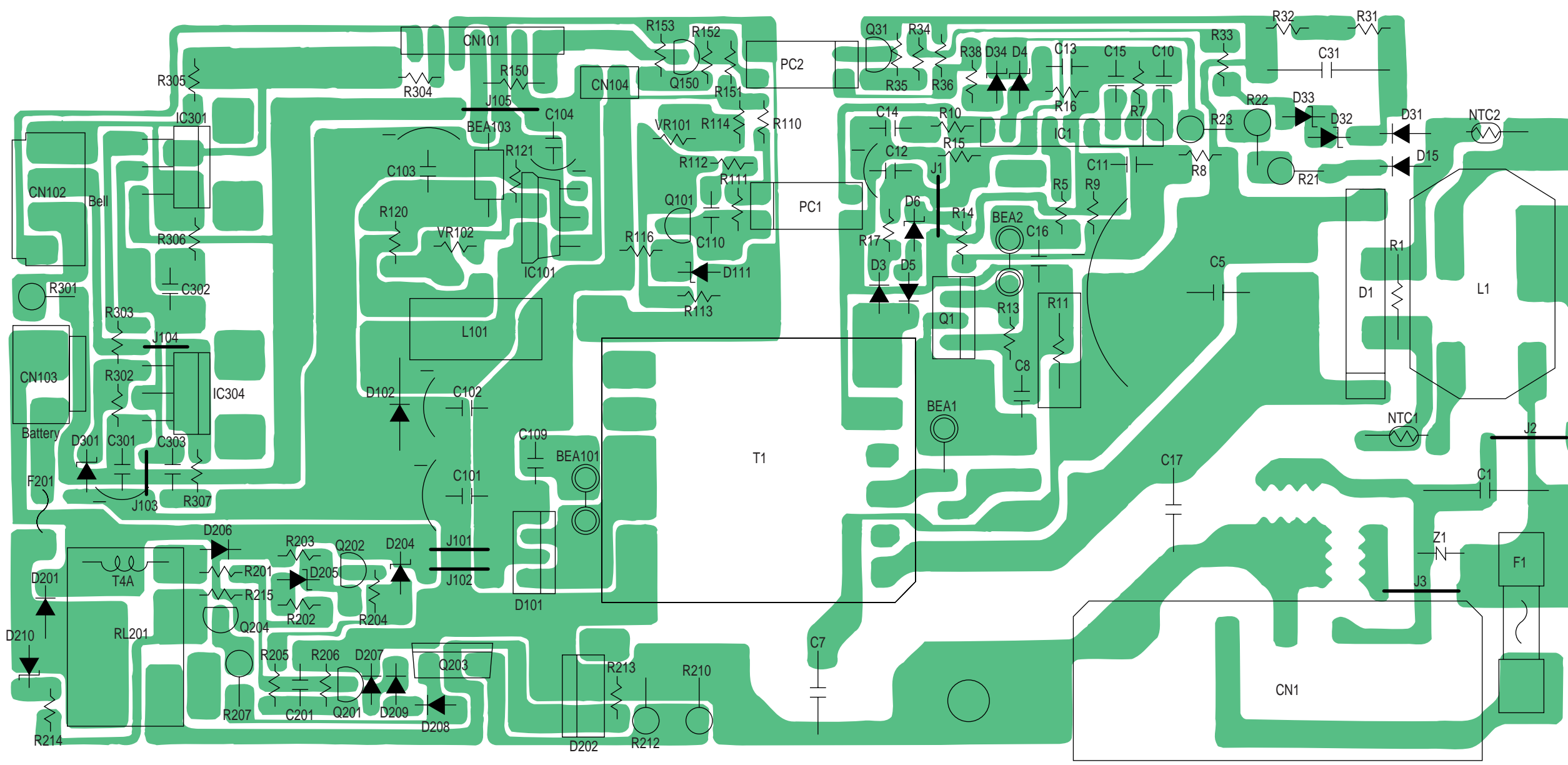
| | | | | |
|---------------------|--------------------------------------|----------------|-------------|-------------|
| Type | | | | |
| ERC:Solid | ERX:Metal Film | PQRD:Carbon | | |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse | | |
| PQ4R:Chip | ERO:Metal Film | ERF:Wire Wound | | |
| Wattege | | | | |
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W 5:5W |
| | | | | |
| ECFD:Semi-Conductor | ECCD,ECKD,PQCBC,PQVP : Ceramic | | | |
| ECQS:Styrol | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester | | | |
| PQCBX,ECUV:Chip | ECEA,ECSZ,ECOS : Electrolytic | | | |
| ECMS:Mica | ECQP : Polypropylene | | | |
| Voltage | | | | |
| ECQ Type | ECQG FCQV Type | ECSZ Type | Others | |
| 1H : 50V | 05 : 50V | OF : 3.15V | OJ : 6.3V | 1V : 35V |
| 2A : 100V | 1 : 100V | 1A : 10V | 1A : 10V | 50,1H : 50V |
| 2E : 250V | 2 : 200V | 1V : 35V | 1C : 16V | 1J : 63V |
| 2H : 500V | | OJ : 6.3V | 1E,25 : 25V | 2A : 100V |

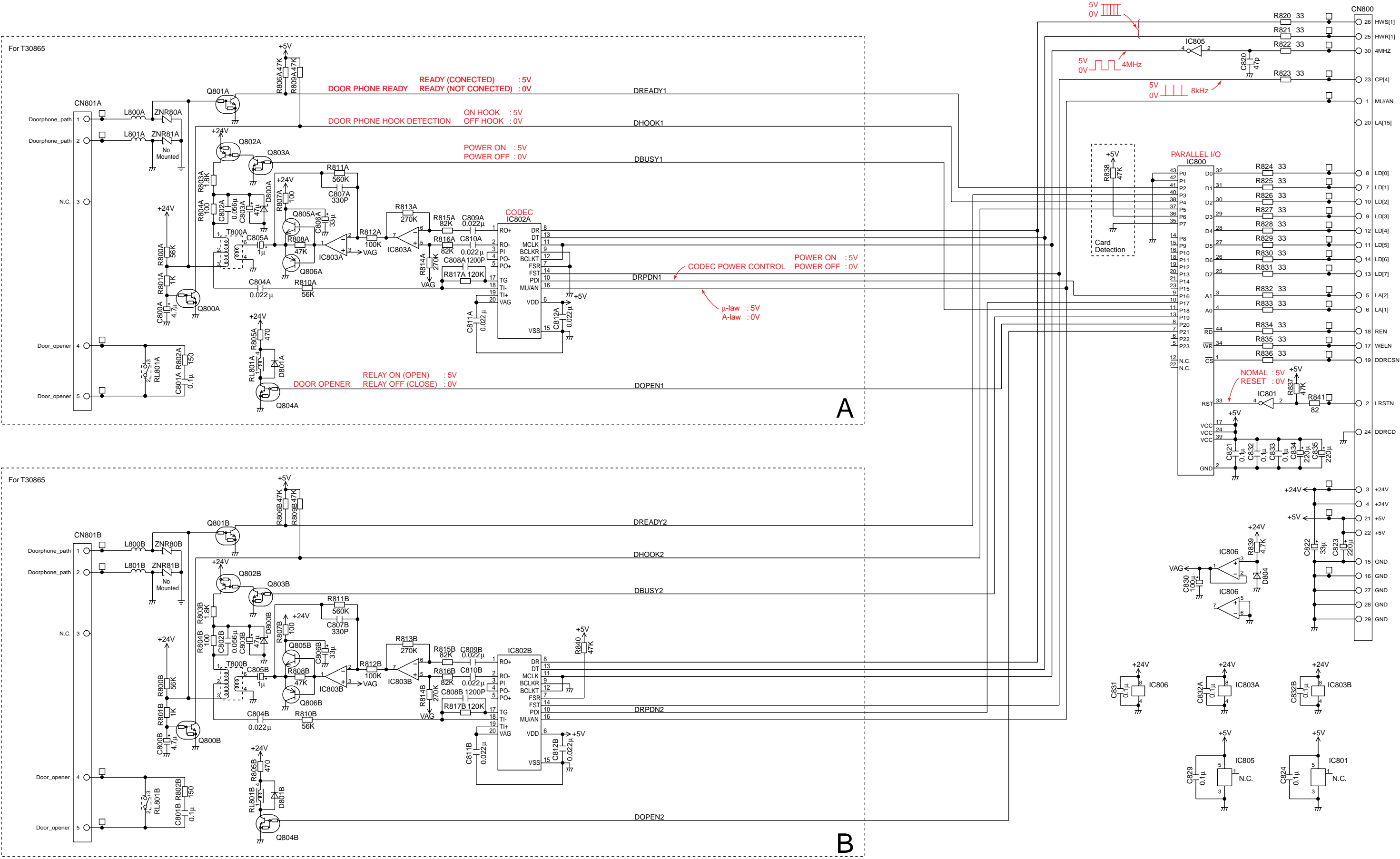
19.1. ACCESSORIES AND PACKING MATERIALS

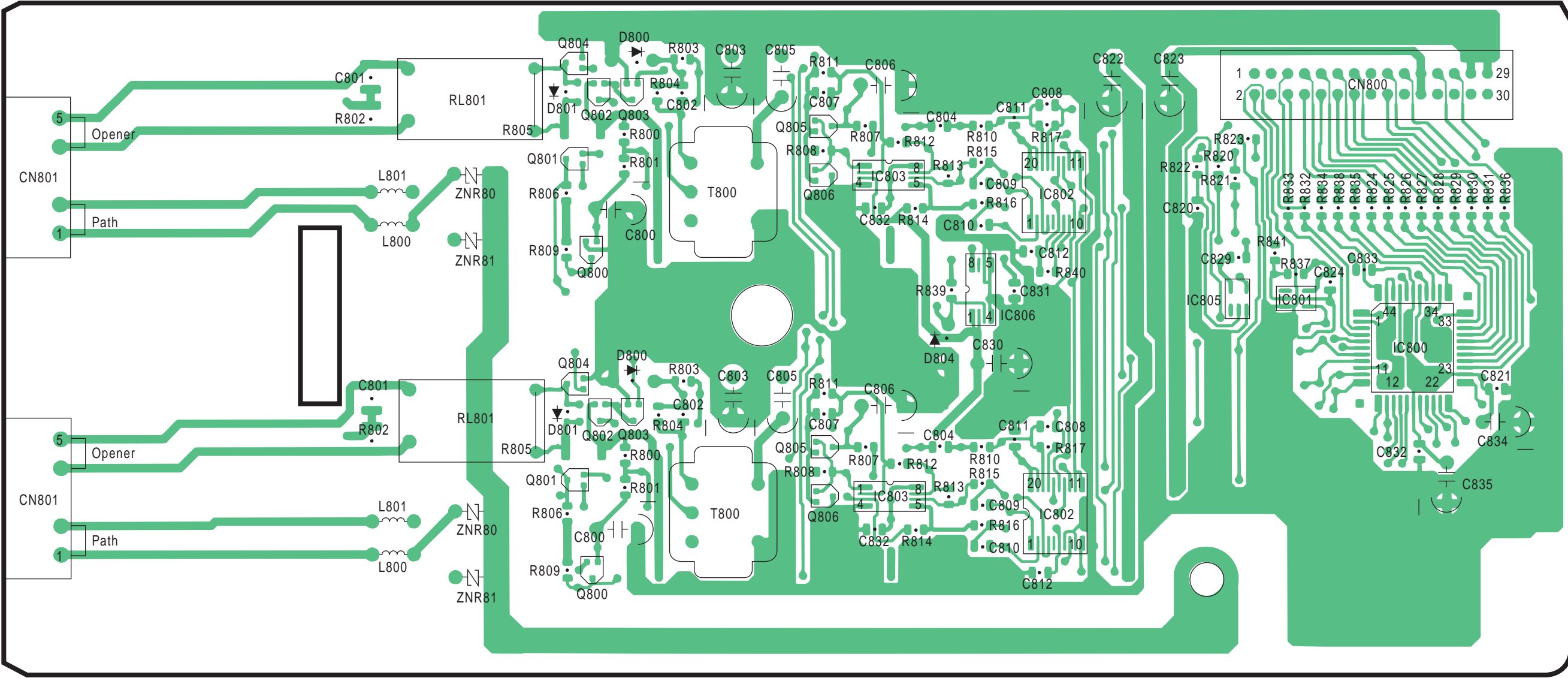
| Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|--------------|-----------------------------------|---------|
| | | ACCESSORIES AND PACKING MATERIALS | |
| | | | |
| | | | |
| A1 | PSJS02Q48Y | CABLE | |
| A2 | XB40M10M10 | LEAD WIRE | |
| A3 | PSBA2F31NM10 | FUSE | |
| A4 | XZB06X10A05 | PROTECTION COVER | |
| A5 | PSQW1387ZA | LEAFLET | |
| | | | |
| | | | |
| P1 | PSPK1524Z | GIFT BOX | |
| P2 | PSQA1964Z | MODEL No. LABEL | |

**H (Q) KXTD612NE / KXTD61260CE / KXTD61261G / KXTD61280CE /
KXTD61291CE / KXA227X / Printed in Japan**

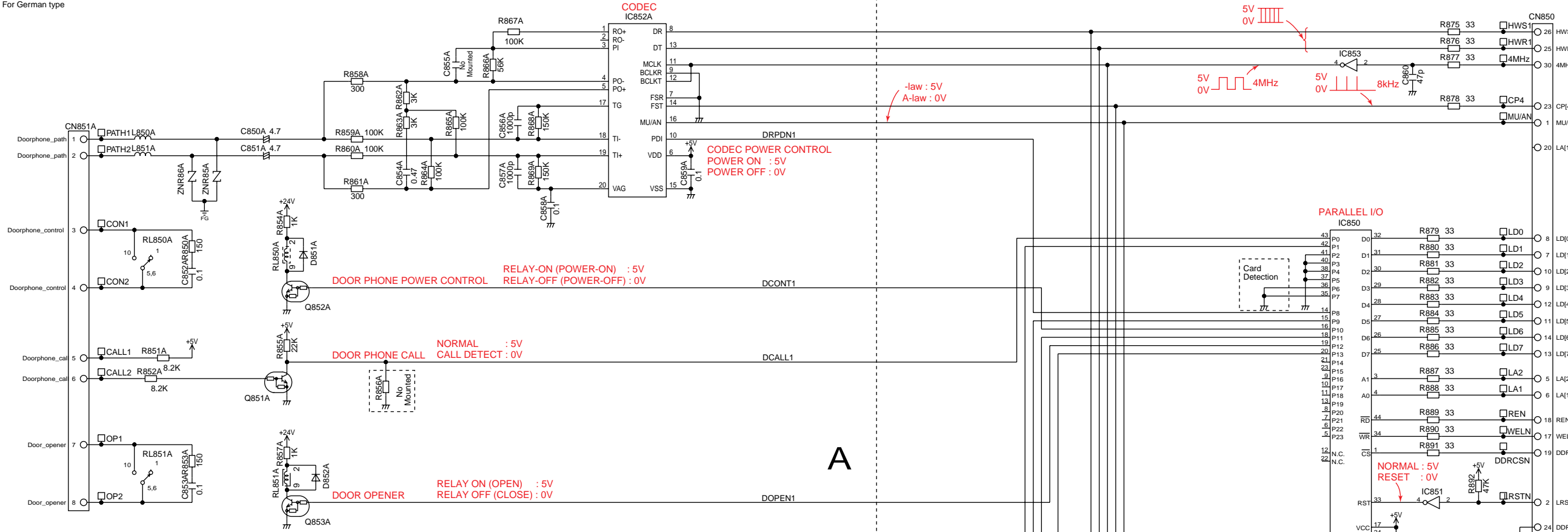




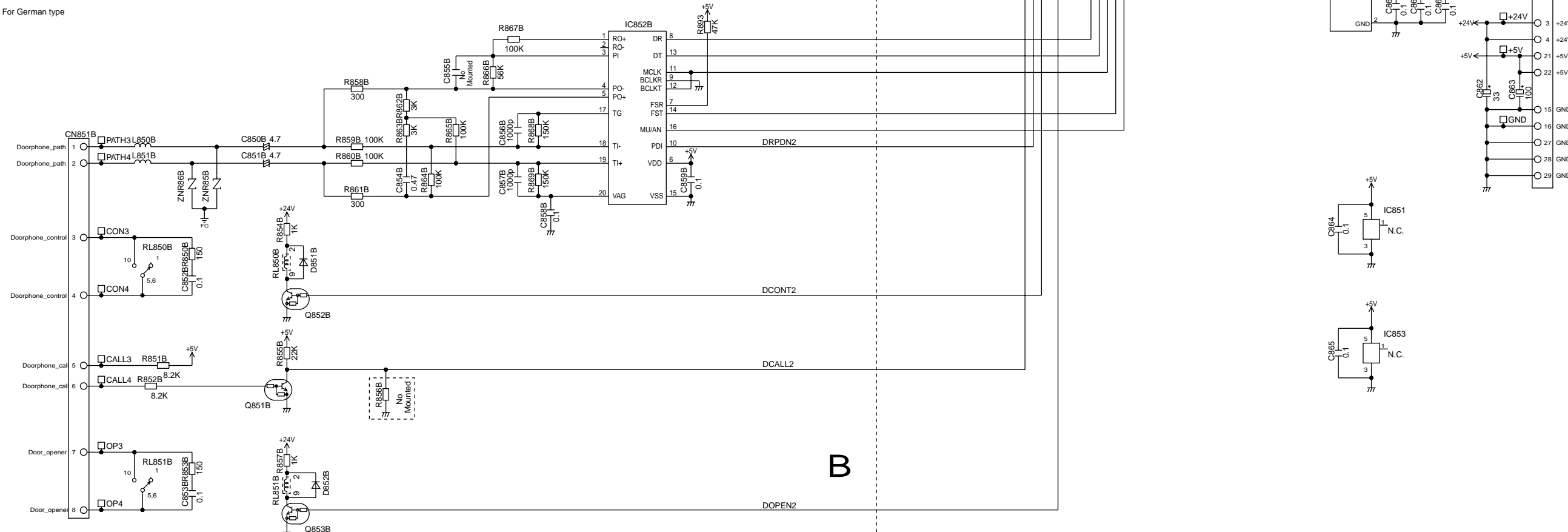


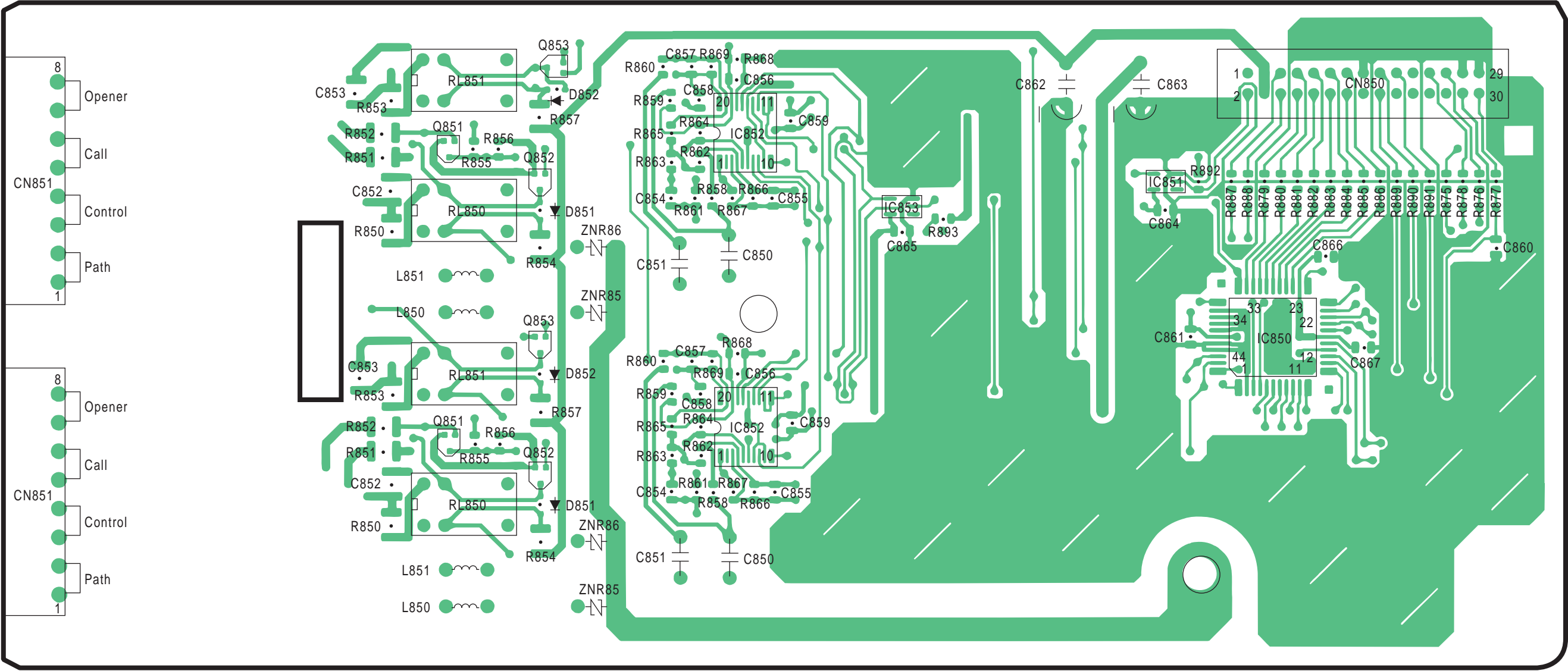


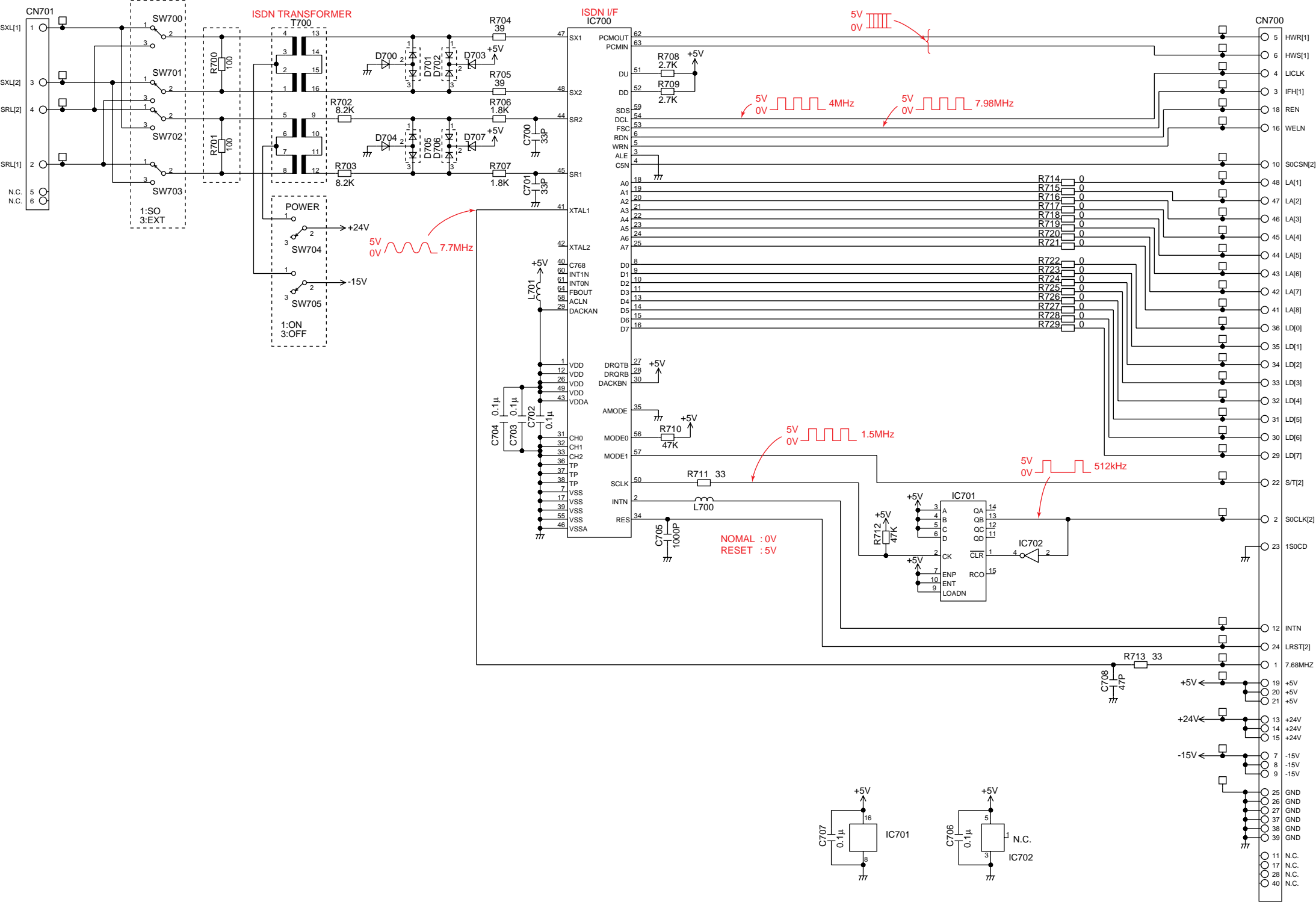
For German type

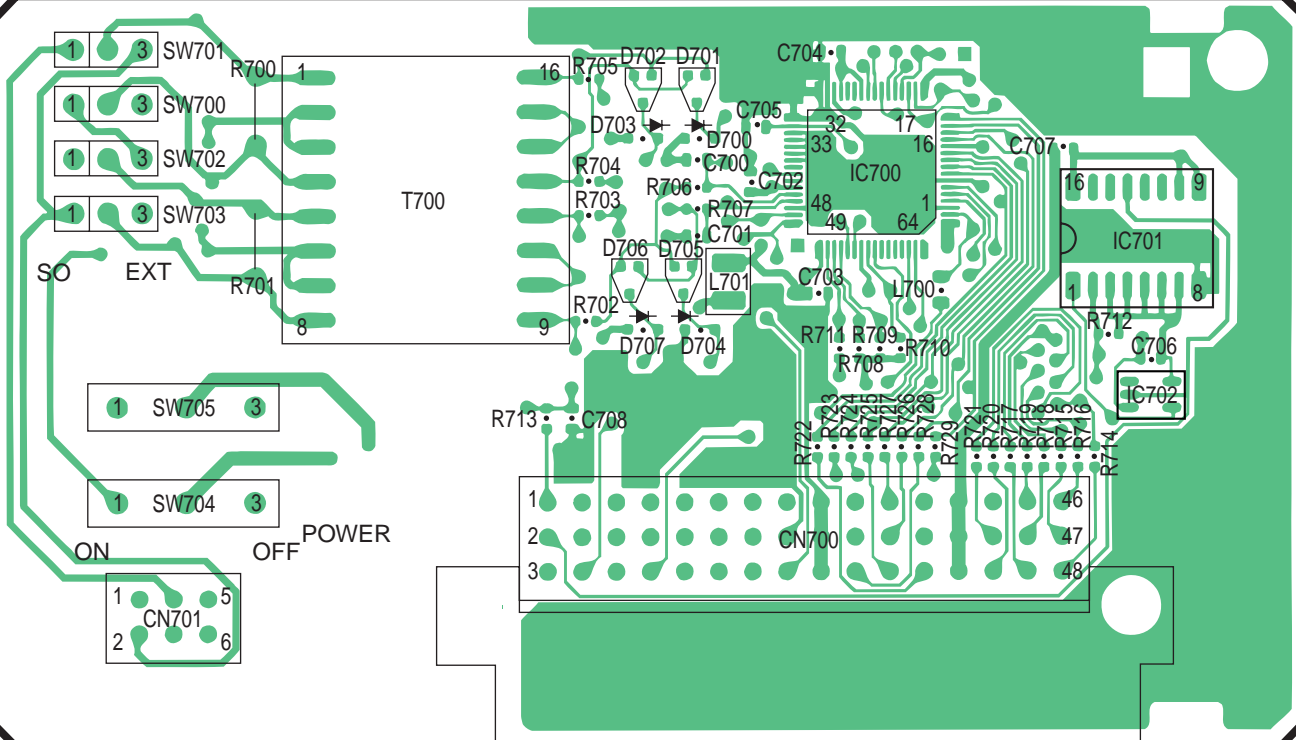


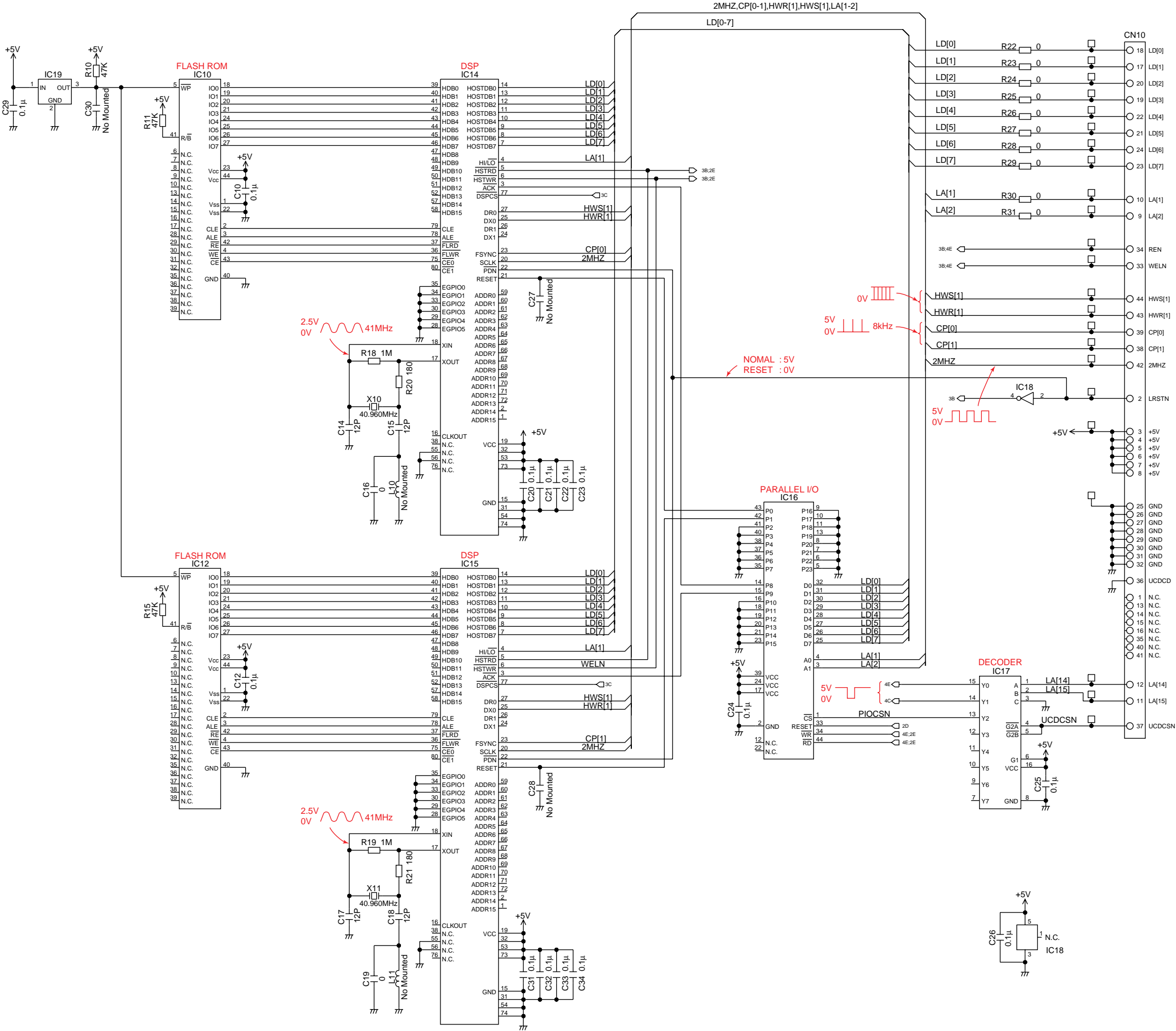
For German type



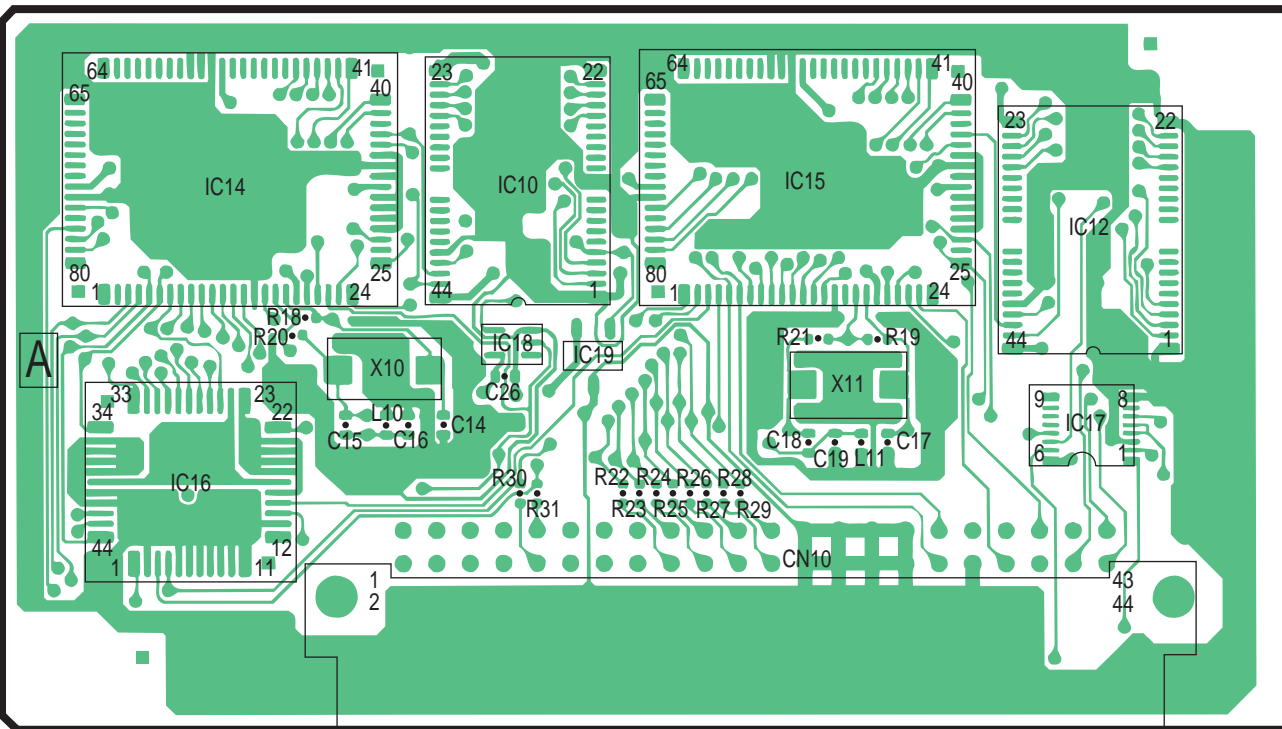








(COMPONENT VIEW)



(BOTTOM VIEW)

